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VOLUME 8

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OF THE

DOMINION OF CANADA

SESSION 1905

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1. Report of the Auditor General, for the fiscal year ended 30th June, 1904. Partial report presented 23rd January and 30th January, 1905, by Sir Wilfrid Laurier; also on 20th February, by Hon. S. A. Fisher.....*Printed for both distribution and sessional papers.*

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2. Public Accounts of Canada, for the fiscal year ended 30th June, 1904. Presented 16th January, 1905, by Hon. W. Paterson.....*Printed for both distribution and sessional papers.*

3. Estimates of the sums required for the services of Canada, for the year ended 30th June, 1906. Presented 18th January 1905, by Sir Wilfrid Laurier..*Printed for both distribution and sessional papers.*

4. Supplementary Estimates for the year ending 30th June, 1905. Presented 17th May, 1905, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

4*a*. Further Supplementary Estimates for the year ending 30th June, 1905. Presented 4th July, 1905, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

5. Supplementary Estimates for the year ending 30th June, 1906. Presented 4th July, 1905, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

5*a*. Further Supplementary Estimates for the year ending 30th June, 1906. Presented 12th July, 1905, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

6. List of Shareholders in the Chartered Banks of Canada, as on 31st December, 1904. Presented 12th April, 1905, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

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7. Report of dividends remaining unpaid, unclaimed balances and unpaid drafts and bills of exchange in Chartered Banks of Canada, for five years and upwards, prior to December 31, 1904. Presented 9th June, 1905, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

8. Report of the Superintendent of Insurance, for the year ended 31st December, 1904.
Printed for both distribution and sessional papers.

9. Abstract of Statements of Insurance Companies in Canada, for the year ended 31st December, 1904. Presented 17th April, 1905, by Hon. W. S. Fielding.
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10. Report of the Department of Trade and Commerce, for the fiscal year ended 30th June, 1904. Presented 31st January, 1905, by Hon. W. Paterson...*Printed for both distribution and sessional papers.*

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11. Tables of the Trade and Navigation of Canada, for the fiscal year ended 30th June, 1904. Presented 16th January, 1905, by Hon. W. Paterson.....*Printed for both distribution and sessional papers.*

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12. Inland Revenues of Canada. Excise, etc., for the fiscal year ended 30th June, 1904. Presented 16th January, 1905, by Hon. L. P. Brodeur.....*Printed for both distribution and sessional papers.*

13. Inspection of Weights, Measures, Gas and Electric Light, for the fiscal year ended 30th June, 1904. Presented 16th January, 1905, by Hon. L. P. Brodeur.

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14. Report on Adulteration of Food, for the fiscal year ended 30th June, 1904. Presented 7th April, 1905, by Hon. L. P. Brodeur.....*Printed for both distribution and sessional papers.*

15. Report of the Minister of Agriculture, for the year ended 31st October, 1904. Presented 31st January, 1905, by Hon. S. A. Fisher.....*Printed for both distribution and sessional papers.*

16. Report of the Director and Officers of the Experimental Farms, for the year 1904. Presented 11th May, 1905, by Hon. S. A. Fisher.....*Printed for both distribution and sessional papers.*

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17. Criminal Statistics for the year ended 30th September, 1904.

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18. Report on Canadian Archives, 1904. Presented 31st May, 1905, by Hon. S. A. Fisher.

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19. Report of the Minister of Public Works, for the fiscal year ended 30th June, 1904. Presented 9th February, 1905, by Hon. C. S. Hyman.....*Printed for both distribution and sessional papers.*

20. Annual Report of the Department of Railways and Canals, for the fiscal year ended 30th June, 1904. Presented 13th February, 1905, by Hon. H. R. Emmerson.

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21. Report of the Department of Marine and Fisheries (Marine), for the fiscal year ended 30th June, 1904. Presented 23rd January, 1905, by Sir Wilfrid Laurier.

Printed for both distribution and sessional papers.

21*a*. Fifth Annual Report of the Geographic Board of Canada, containing all decisions to 30th June, 1904, Presented 7th February, 1905, by Sir Wilfrid Laurier.

Printed for both distribution and sessional papers.

21*b*. List of Shipping issued by the Department of Marine and Fisheries, being a list of vessels on the registry books of Canada, on the 31st December, 1904. Presented 5th June, 1905, by Hon. J. R. F. Préfontaine.....*Printed for both distribution and sessional papers.*

22. Report of the Department of Marine and Fisheries (Fisheries), for the fiscal year ended 30th June, 1904. Presented 16th March, 1905, by Hon. J. R. F. Préfontaine.

Printed for both distribution and sessional papers.

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23. Report of the Harbour Commissioners, etc., 1904...*Printed for both distribution and sessional papers.*

24. Report of the Postmaster General, for the year ended 30th June, 1904. Presented 17th January, 1905, by Sir Wilfrid Laurier.....*Printed for both distribution and sessional papers.*

25. Annual Report of the Department of the Interior, for the fiscal year ended 30th June, 1904. Presented 2nd February, 1905, by Sir Wilfrid Laurier....*Printed for both distribution and sessional papers.*

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25a. Report of the Surveyor General of Dominion Lands for the year ending 30th June 1904.
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26. Summary Report of the Geological Survey Department for the calendar year 1904.
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27. Annual Report of the Department of Indian Affairs, for the fiscal year ended 30th June 1904. Presented 23rd January, 1905, by Sir Wilfrid Laurier.. *Printed for both distribution and sessional papers.*

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28. Report of the Royal North-West Mounted Police, 1904. Presented 21st March, 1905, by Sir Wilfrid Laurier..... *Printed for both distribution and sessional papers.*

29. Report of the Secretary of State of Canada, for the year ended 31st December, 1904. Presented 4th May, 1905, by Sir Wilfrid Laurier... ..... *Printed for both distribution and sessional papers.*

30. Civil Service List of Canada, 1904. Presented 16th January, 1905, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.

31. Report of the Board of Civil Service Examiners, for the year ended 31st December, 1904. Presented 4th May, 1905, by Sir Wilfrid Laurier .... *Printed for both distribution and sessional papers.*

32. Annual Report of the Department of Public Printing and Stationery, for the year ended 30th June, 1904. Presented 19th April, 1905, by Sir Wilfrid Laurier.
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33. Report of the Joint Librarians of Parliament for the year 1904. Presented 12th January, 1905, by the Hon. The Speaker..... .... *Printed for sessional papers.*

34. Report of the Minister of Justice as to Penitentiaries of Canada, for the year ended 30th June, 1904. Presented 30th January, 1905, by Hon. C. Fitzpatrick.
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35. Report of the Department of Militia and Defence of Canada, for the year ended 31st December, 1904. Presented 14th April, 1905, by Sir Frederick Borden.
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36. Report of the Department of Labour, for the year ended 30th June, 1904 Presented 17th January, 1905, by Sir Wilfrid Laurier .... *Printed for both distribution and sessional papers.*

36a. Report of the commissioner and other documents, in the matter of the royal commission to inquire into the alleged employment of aliens in connection with the surveys of the proposed Grand Trunk Pacific Railway. Presented 1st March, 1905, by Sir William Mulock.
Printed for both distribution and sessional papers.

36b. The royal commission appointed to inquire into the immigration of Italian labourers to Montreal, and the alleged fraudulent practices of employment agencies.—Report of the commissioner and evidence. Presented 19th May, 1905, by Sir William Mulock.
Printed for both distribution and sessional papers.

36c. Report of the commissioner on the investigation into the alleged employment of aliens by the Père Marquette Railroad Company. Presented 19th May, 1905, by Sir William Mulock.
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36d. Minutes of Evidence, Père Marquette Railroad....*Printed for both distribution and sessional papers.*

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37. Return of the Tenth General Election for the House of Commons of Canada, held on the 27th day of October, 1904, and the 3rd day of November, 1904, followed by a Return of the By elections held during the Ninth Parliament. Presented 23rd June, 1905, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.

38. Return of over-rulings by the Treasury Board of the Auditor General's decisions between the sessions of 1904 and 1905. Presented 16th January, 1905, by Hon. W. Paterson.....*Not printed.*

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39. Statement of superannuations and retiring allowances in the civil service during the year ended 31st December, 1904, showing name, rank, salary, service, allowance and cause of retirement of each person superannuated or retired, and also whether vacancy filled by promotion or by new appointment, and salary of any new appointee. Presented 16th January, 1905, by Hon. W. Paterson. *Not printed.*

40. Return showing the expenditure on account of unforeseen expenses from the 1st July, 1904, to the 11th January, 1905, in accordance with the Appropriation Act of 1904. Presented 16th January, 1905, by Hon. W. Paterson... ... *Not printed.*

41. Ordinances of the Yukon Territory for the year 1904. Presented 17th January, 1905, by Sir Wilfrid Laurier... *Not printed.*

42. Statement in pursuance of section 17 of the Civil Service Insurance Act, for the year ending 30th June, 1904. Presented 17th January, 1905, by Hon. W. Paterson... *Not printed.*

43. The King's Regulations and Orders for the Militia of the Dominion of Canada. Presented 17th January, 1905, by Sir Wilfrid Laurier... *Not printed.*

44. Report of the Commissioner, Dominion Police Force, for the year 1904. Presented 17th January, 1905, by Hon. C. Fitzpatrick. ... *Not printed.*

45. Detailed statement of all bonds and securities registered in the Department of the Secretary of State of Canada, since last Return, 23rd March, 1904, submitted to the Parliament of Canada under section 23, chapter 19 of the Revised Statutes of Canada. Presented 24th January, 1905, by Sir Wilfrid Laurier... *Not printed.*

46. Statement of fishing bounty expenditure for the year 1903-04. Presented 24th January, 1905, by Sir Wilfrid Laurier... *Not printed.*

47. Return to an address of the House of Commons, dated 9th May, 1904, showing all papers, letters, petitions and resolutions in reference to payments of claims for losses arising out of the rebellion of 1885, in the North-west Territories. Presented 25th January, 1905.—*Mr. Davis*... *Not printed.*

48. Return of orders in council which have been published in the *Canada Gazette* and in the *British Columbia Gazette*, between 1st January and 31st December, 1904, in accordance with the provisions of subsection *(d)* of section 38 of the regulations for the survey, administration, disposal and management of Dominion lands within the 40-mile railway belt in the province of British Columbia. Presented 27th January, 1905, by Sir Wilfrid Laurier... *Not printed.*

49. Return of orders in council which have been published in the *Canada Gazette* between 1st January and 17th December, 1904, in accordance with the provisions of clause 91 of the Dominion Lands Act, chapter 54 of the Revised Statutes of Canada, and its amendments. Presented 27th January, 1905, by Sir Wilfrid Laurier... *Not printed.*

50. Papers in relation to the Arbitration: Intercolonial Railway *vs.* Grand Trunk Railway Company. Presented 31st January, 1905, by Hon. C. Fitzpatrick... *Not printed.*

51. Return (in so far as the Department of the Interior is concerned) of copies of all orders in council, plans, papers and correspondence which are required to be presented to the House of Commons, under a resolution passed on 20th February, 1882, since the date of the last return under such resolution. Presented 31st January, 1905, by Sir Wilfrid Laurier ... *Not printed.*

52. Return of all lands sold by the Canadian Pacific Railway Company, from the 1st October, 1903, to the 1st October, 1904. Presented 1st February, 1905, by Sir Wilfrid Laurier... *Not printed.*

53. Return to an address of the House of Commons, dated 6th February, 1905, for copies of all correspondence between the goverment of Canada, or any member thereof, and the government of the North-west Territories, or any of its members, in reference to the granting of provincial autonomy to the said territories, since the date of the last prorogation of parliament. Presented 8th February, 1905.—*Mr. Monk*... *Printed for sessional papers.*

54. Return to an address of the House of Commons, dated 6th February, 1905, for a copy of the letter of resignation of the Honourable A. G. Blair, as Chairman of the Board of Railway Commissioners, and of all correspondence in reference to the said resignation. Presented 9th February, 1905. – *Mr. Monk*... *Not printed.*

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55. Return to an order of the House of Commons, dated 30th January, 1905, showing the value of vegetables imported from the United States, and entered at the ports of Montreal and Toronto, during the fiscal year ending the 30th of June, 1904; giving separately the values for the first and the last six months of said year. Also a statement showing the value of canned, preserved or dried vegetables entered at said ports for said fiscal year; and the amounts of duties collected at both ports in the above cases. Presented 9th February, 1905.—*Mr. Monk*.....*Not printed.*

56. Report of the Committee of the Honourable Privy Council of the 18th January, 1905, relative to the embargo on Canadian cattle. Presented 10th February, 1905, by Hon. S. A. Fisher.
Printed for sessional papers.

57. Return to an order of the House of Commons, dated 1st February, 1905, giving the names of all officials, clerks and employees on the pay-roll of the Board of Railway Commissioners for Canada, on the first of January, 1905, with the amount of salary in each case. Presented 13th February, 1905.—*Mr. Perley* .....*Printed for sessional papers.*

57*a* Report of the Board of Railway Commissioners for Canada: Part I. Report of proceedings of Board, February 1st to June 30th, 1905. Part II. Report of proceedings of Board, July 1st to December 31st, 1904. Presented 22nd May, 1905, by Hon. H. R. Emmerson.....*Not printed.*

58. Return to an order of the House of Commons, dated 26th January, 1905, for copies of the letters of Mr. Tiffen, general traffic manager, and J. E. Price, general superintendent, of the Intercolonial Railway, reporting Odbur White, station agent at Fredericton, N.B., as not qualified for his position; and of all other correspondence in the possession of the Government or the department of railways and canals, relating to the dismissal of said Odbur White. Presented 13th February, 1905.—*Mr. Crocket*.....*Not printed.*

58*a*. Return to an order of the House of Commons, dated 6th February, 1905, for copies of all correspondence, between the government or any minister, and any party or parties, concerning the dismissal of the postmaster at Shelburne, Ontario, on or about the 7th of March, 1903. Presented 28th February, 1905.—*Mr. Barr*.....*Not printed.*

58*b*. Return to an order of the House of Commons, dated 20th March, 1905, for copies of all correspondence had with the minister of railways and canals, or any officer in his department, in reference to the dismissal of James Ritchie, inspector of masonry on the Trent Valley Canal, Gamebridge, and the appointment of his successor. Presented 5th April, 1905.—*Mr. Foster*.....*Not printed.*

58*c*. Return to an order of the House of Commons, dated 20th February, 1905, for copies of all correspondence, papers, letters, recommendations, reports petitions, &c., in possession of the government or any member or official thereof, relating to the dismissal of Henry Curtis Lawson, as postmaster at Stanhope, Prince Edward Island, and the appointment of his successor. Presented 1st May, 1905. *Mr. Martin (Queen's)*.....*Not printed.*

58*d*. Return to an order of the House of Commons dated 20th February, 1905, for copies of correspondence between the government, or any minister, and any party or parties, concerning the dismissal of the postmaster at St. Claude, Manitoba, Mr. J. P. Benrier, on or about the 1st day of November, 1904. Presented 28th June, 1905.—*Mr. Staples*.....*Not printed.*

59. Return to an order of the House of Commons dated 8th February, 1905, for copies of all forms and instructions issued to the returning officers in the several provinces and territories for use in the recent general election for the house of commons. Presented 15th February, 1905.—*Mr. Barker.*
Not printed.

60. Return to an order of the House of Commons, dated 6th February, 1905, showing the amount of revenue collected, (1) by the department of inland revenue; (2) by the department of customs, during each of the past ten years; and also in the aggregate during the same period, at the following points in the North-west Territories, viz.: Edmonton, Strathcona, Red Deer, Calgary, Medicine Hat, Maple Creek, Lethbridge, Coutts, Cardston and Macleod Presented 15th February, 1905.—*Mr. Roche (Marquette)*.....*Not printed.*

61. Copy of the rules made by the supreme court of judicature of the province of Prince Edward Island, pursuant to section 533 of the Criminal Code, 1892. Presented 16th February, 1905, by the Hon. The Speaker .....*Not printed.*

62. Return to an order of the House of Commons, dated 13th February, 1905, showing the respective dates of appointments of the commissioners and working staff of the Grand Trunk Pacific Railway Commission; and the total amount expended thereon to December 31, 1904, under the heads, (*a*) salaries of commissioners; (*b*) salaries of staff; (*c*) expenses; (*d*) rental of quarters. Presented 17th February, 1905.—*Mr. Foster*.....*Printed for sessional papers.*

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62*a*. Return to an order of the House of Commons, dated 27th February, 1905, showing the total number of officers, civil engineers and other employees now engaged in the surveys of the Transcontinental Railway, and works connected therewith, under the Transcontinental Railway Construction Commission ; the name and place of residence of each of the above persons at the time of his appointment ; and the functions and salaries of each of the above. Presented 9th March, 1905.—*Mr. Gervais*.....*Printed for sessional papers.*

62*b*. Return to an order of the House of Commons, dated 6th March, 1905, for a statement showing : 1. The names of the civil engineers and others, who were employed by the railway commission to make a survey for a line of railway in the county of Joliette in Quebec province, during the months of October and November, 1904. 2. The salary paid to each of said engineers and assistants for the work already performed in the said county of Joliette. 3. The number of days during which each of said engineers and assistants was employed. 4. A copy of instructions given to said engineers ; also a copy of report with plan or other detailed information which said engineers have made. 5. A statement showing the expenses (other than salary or salaries) entailed for the completion of said work and survey thus made in the said county of Joliette. Presented 23rd March, 1905.—*Mr. Monk*. *Not printed.*

62*c*. Interim report of the Commissioners of the Transcontinental Railway. Presented 22nd May, 1905, by Hon. H. R. Emmerson.....*Printed for both distribution and sessional papers.*

63. Return to an order of the House of Commons, dated 23rd January, 1905, for a statement showing the amount of money spent by the government, or any department thereof, in the parish of Chateau-Richer, county of Montmorency, for building wharfs, piers, docks, breakwaters, etc., or for removing boulders or rocks from the beach in front of said parish, or for any other public works, from the 1st of September, 1904, to the 15th of November of the same year. Presented 17th February, 1905.—*Mr. Morin*.....*Not printed.*

64. Copies of telegrams in connection with the late election in the Yukon Territory. Presented 17th February, 1905, by Sir Wilfrid Laurier.....*Not printed.*

65. Return to an order of the House of Commons, dated 1st February, 1905, for copies of all correspondence, telegrams, etc., which passed between the minister of marine and fisheries, or the deputy minister of marine and fisheries, or any other official of the said department, and Captain R. Salmon, former wreck commissioner, in the matter of the *Canada-Cape Breton* investigation and the resignation of Captain Salmon from his position as wreck commissioner. Presented 20th February, 1905.—*Mr. Ames*.....*Not printed.*

65*a*. Return to an order of the House of Commons, dated 6th March, 1905, of the "statement of the case" in the *Canada-Cape Breton* accident, as served by Captain Reid, of Montreal, upon witnesses whose certificates or license was liable to be dealt with in connection with investigation regarding said casualty. Presented 4th April, 1905.—*Mr. Ames*..... *Not printed.*

66. Return to an order of the House of Commons, dated 6th February, 1905, showing the total number of acres of public lands undisposed of in the several and respective provisional districts of the North-west Territories of Canada. Presented 22nd February, 1905.—*Mr. McCarthy (Calgary)*. *Printed for sessional papers.*

66*a*. Return to an address of the House of Commons, dated 25th January, 1905, for copies of all orders in council, reports of the minister, recommending and authorizing the sale of Government lands in the North-west Territories during the years 1903 and 1904. Also a return of the lands sold, if any ; the rates and terms at which they were sold, and the persons to whom they were sold. Presented 9th March, 1905.—*Mr. Foster*.....*Not printed.*

67. Return to an address of the House of Commons, dated 8th February, 1905, for copies of all circulars or instructions, regulations and rulings made by the customs department together with any orders in council, relating to section 19 and subsections thereto of the Act to amend the Customs Tariff, 1897, assented to August 10th, 1904, commonly known as the "dumping clauses." Presented 23rd February, 1905.—*Mr. Kemp*.....*Not printed.*

68. Return to an order of the House of Commons, dated 13th February, 1905, for copies of all correspondence had with the government or any member thereof, or any official under the government, relative to the appointment of returning officers for the county of Dorchester, Quebec, for the general election of 1904, and relative to the resignation of any one so appointed. Presented 23rd February, 1905.—*Mr. Morin*.....*Not printed.*

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69. Return of the names and salaries of all persons appointed to or promoted in the several departments of the civil service, during the calendar year 1904, Presented 23rd February, 1905, by Sir Wilfrid Laurier..... *Not printed.*

70. Return to an order of the House of Commons, dated 20th February 1905, showing the total amount expended in wages to men employed at the Sorel shipyard, from the 30th June, 1904, to the 1st February, 1905; indicating separately the amount so expended for each month. Also the total amount expended in purchases for the same shipyard during the same period. Presented 27th February, 1905.—*Mr. Monk*..... *Not printed.*

71. Return to an order of the House of Commons, dated 13th February, 1905, showing the names of all persons added to the pay-roll of the meteorological service, permanently or temporarily, since June 30, 1904, and the amount received by each to date. Presented 27th February, 1905.—*Mr. Monk*. *Not printed.*

72. Return to an order of the House of Commons, dated 13th February, 1905, for copies of all correspondence between the minister of marine and fisheries and the Submarine Signal Company, of Boston, U.S.A., including all contracts or agreements which may have been entered into between the aforesaid parties. Presented 27th February, 1905.—*Mr. Monk*..... *Not printed.*

73. Return to an order of the House of Commons, dated 6th February, 1905, showing a statement of the business done during each of the past ten years, and also in the aggregate during the same period, in connection with the transmission of mail matter; and with the issue and payment of money orders and postal notes at each post office in the provisional district of Alberta. Presented 28th February, 1905.—*Mr. Roche (Marquette)*..... *Not printed.*

74. Return to an order of the House of Commons, dated 9th February, 1905, showing the number of box and flat cars added to the equipment of the Intercolonial Railway for each year from 1900 to 1904, inclusive; the total number on January 1, 1900, and on January 1, 1904, respectively; and the number in use on roads off the Intercolonial Railway on January 1, 1900 and 1904 respectively. Presented 1st March, 1905.—*Mr. Foster*..... *Not printed.*

75. Return to an order of the House of Commons, dated 20th February, 1905, showing the number of railway and steamboat disasters in Canada in 1904. The number in which investigation for cause was made, such cause, and the cause given. The means, if any, employed by the proper authorities to prevent the recurrence of such accidents, wherever due to any preventable cause. The methods adopted in England where railway accidents are so rare, and any other information which may lead to the safeguarding of the lives and property of Canadians obliged to make use of these public facilities. Presented 1st March, 1905.—*Mr. Martin (Queen's)*..... *Not printed.*

76. Return to an order of the House of Commons, dated 30th January, 1905, for copies of all circulars or advices issued by the Intercolonial Railway governing the transport of hay, under the free transport order in council of 1904, and of all certificates signed by municipalities or individuals to whom hay was delivered thereunder. Presented 1st March, 1905.—*Mr. Foster*..... *Not printed.*

76*a*. Return to an address of the House of Commons, dated 25th January, 1905, for copies of all correspondence had with the government or any member thereof, or with any official of the Intercolonial Railway, in reference to the transport of hay during the year 1904, from points in Ontario and Quebec to points along the Intercolonial Railway, including the railway in Prince Edward Island. Also the report of the minister to council and the order in council, if any was passed, recommending or authorizing a rebate or reduction in the rates for carrying the same. And the names of the parties to whom rebates or reductions in the rate of freight upon hay were made, and the quantities shipped to each. Presented 31st March, 1905.—*Mr. Foster*..... *Printed for distribution.*

77. Partial return to an order of the House of Commons, dated 1st February, 1905, showing the names of all the commercial agents of Canada; where located; previous location, occupation and qualifications; amount of salary of each; other expenses connected with their positions; class of product they are chiefly interested in placing on the market; procedure in the different locations; results, specific and general. Presented 1st March, 1905.—*Mr. Martin (Queen's).*

Printed for sessional papers.

77*a*. Supplementary return to No. 77. Presented 28th April, 1905..... *Printed for sessional papers.*

78. Return to an address of the House of Commons, dated 20th February, 1905, for a copy of all correspondence relating to the order in council of 25th August, 1904, providing for the preparation of voters' lists in the unorganized territories of Ontario, together with a copy of such order in council, and

CONTENTS OF VOLUME 14—*Continued.*

all correspondence relating to the voters' lists prepared under or pursuant to such order in council; and especially all correspondence between any of the ministers or their deputies or officers in any of the departments, and the following persons, namely: His Honour Edward O'Connor, Junior Judge of Algoma, W. A. Quibell, Police Magistrate, Sault Ste. Marie, W. H. Carney, Sheriff of Algoma, J. J. Kehoe, Clerk of the Peace of Algoma, Jacob Stevenson, Sault Ste. Marie, and all other persons, relating to the preparation or revision of such voters' lists. Also for copies of all instructions sent, issued or delivered to any of the said persons, or to any other persons, relative to the preparation or revision of such voters' lists, or any of them. Presented 1st March, 1905.—*Mr. Boyce*
Not printed.

79. Return to an order of the House of Commons, dated 1st February, 1905, showing: 1. The amount of money paid by the Intercolonial and Prince Edward Island Railways, between June 30th, 1904, and January 1st, 1905, arising out of claims for damages and refunds of all kinds; also compensations for injuries. 2. The nature and amount in each case. 3. The name of the person or persons, firm or corporation to whom the same was paid. 4. The dates in each case on which the claims for damages, refunds or compensations for injuries were filed. 5. The dates of payment of each. Presented 3rd March, 1905.—*Mr. Kemp*..... ..... *Not printed.*

80. Return to an order of the House of Commons, dated 6th February, 1905, showing the acreage in each township in the provisional district of Alberta, and in those parts of the provisional districts of Saskatchewan and Assiniboia lying west of range 13, west of the third meridian in the Dominion lands system of survey, that has been disposed of in each of the following ways: *(a)* acreage patented, either as homesteads or on sales; *(b)* acreage not patented, but held under homestead entry or by purchase; and *(c)* acreage patented or reserved for railway land grants. Also the number of homestead entries made to date in the following land agencies: Edmonton, Red Deer, Calgary, Lethbridge, and so much of Battleford and Regina as lies west of range 13, west of the third meridian. Presented 3rd March, 1905.—*Mr. Roche (Marquette)*..... ..... *Not printed.*

81. Return to an order of the House of Commons, dated 2nd February, 1905, for copies of correspondence exchanged between parties in the town of Verdun, county of Jacques Cartier, and the Montreal Harbour Board, or the department of marine and fisheries, respecting protection against floods at Verdun, along the shore of the St. Lawrence River. Presented 3rd March, 1905.—*Mr. Monk.*
Not printed.

82. Return to an order of the House of Commons, dated 13th February, 1905, showing all contracts which have since July 1st, 1903, been made or renewed by the department of marine and fisheries, with any person or company, for the placing, maintenance or care of harbour buoys; giving in each case the name of the approved contractor, the annual amount of his contract, and time of its expiry; and further indicating in what instances public tenders were not called for, and in what instances the lowest tenders were not accepted. Presented 3rd March, 1905.—*Mr. Ames*.....*Not printed.*

83. Return to an order of the House of Commons, dated 8th February, 1905, for copies of all correspondence exchanged since the 1st of October last between *(a)* P. W. St. George, Government Superintendent Engineer, Montreal Harbour sheds, and the Honourable Minister of Marine and Fisheries, and between *(b)* the Honourable Minister or the Deputy Minister of Marine and Fisheries and the Harbour Commissioners of Montreal, regarding the plans, specifications or contracts for the new sheds in the port of Montreal. Presented 3rd March, 1905.—*Mr. Ames*... .... *Not printed.*

83*a*. Return to an address of the House of Commons, dated 25th January, 1905, for copies of all correspondence between the Board of Montreal Harbour Commissioners and the Department of Marine and Fisheries in regard to the erection of permanent sheds upon the wharfs in the harbour of Montreal and of the correspondence had between the Government and the Federation of Shippers; and engineers' reports in the possession of the government upon the same subject; also copies of correspondence between the Department of Marine and Fisheries and F. D. Monk, M.P., upon the same subject. Presented 7th March, 1905.—*Mr. Monk*..... ... ...*Not printed.*

84. Statement of the affairs of the British Canadian Loan and Investment Company, for the year ended 31st December, 1904. Presented (Senate) 14th February, 1905, by the Hon. The Speaker.*Not printed.*

85. Return to an address of the Senate, dated 5th August, 1904, showing the names of all liquid mixtures known as patent or proprietary medicines purporting to remove the most varied forms of disease occurring in the human body, and when weakened by such disease or by any indulgence, habit or accident, to restore it to its former strength and vigour. Showing also the amount of money, if any,

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paid by importer, maker, mixer or vendor, to the government as special tax or license, and to whom paid. Showing likewise if the government has any knowledge of the ingredients which are employed to make these compounds: 1. Has such knowledge been acquired from the statements of the parties who have the formula? 2. Has it been acquired by qualitative and quantitative analysis of the Dominion analyst, or by any other practical chemist, if so, what quantities are contained in a determinate, say, one fluid ounce, of the following named ingredients: 1. Water, quantity in a determinate measure, say, one fluid ounce, of the preparations examined. 2. Alcohol in any form other than absolute; methylated or proof spirit or any other form; essences, ethers or any other solvent; colouring or flavouring substances, and, lastly, the solid ingredients in said preparations, the quantity and names of each. Presented 28th February, 1905.—*Hon. Mr. Sullivan.*

Printed for sessional papers.

86. Return to an address of the Senate, dated 14th February, 1905, showing: Imports of aluminum in pigs or ingots into Canada. Imports of aluminum into wire, sheets or any other form. Imports of oxide of aluminum. Imports of alumina. Quantities by weight-values. Countries imported from, and ports of entry in Canada, and what countries the production of. Exports of aluminum in pigs or ingots. Exports of aluminum in any form, manufactured. What countries exported to, and ports of shipment in Canada. Quantities by weight-values. For the year 1904. Presented 28th February, 1905.—*Hon. Mr. Domville*..... *Not printed.*

87. Return to an order of the House of Commons, dated 9th February, 1905, showing the number of inspectors or other persons employed to attend to the enforcement of the Fruit Marks Act of 1901. The names of the said inspectors or other persons, and the salaries paid to each, respectively. The total amount paid to said persons on account of salaries up to the 1st of January, 1905. Also the amount paid to said persons for travelling and other expenses up to 1st January, 1905. Presented 9th March, 1905.—*Mr. Taylor*..... *Not printed.*

88. Return to an address of the House of Commons, dated 20th February, 1905, for copies of all correspondence addressed to the government, or any minister, in reference to the cables of the Empire. Presented 9th March, 1905.—*Mr. Logan*..... *Not printed.*

89. Return to an order of the House of Commons, dated 13th February, 1905, for copies of all correspondence in reference to the building of a new boat to be employed to maintain winter communication between Prince Edward Island and the mainland of Canada. The engineer's and inspector's report of the present condition of the ss. *Stanley* now on that route; the repairs made; the damage sustained by contact with heavy ice; and any other information in regard to her age, class, etc., in any of the government departments. Presented 10th March, 1905.—*Mr. Martin (Queen's).*

Not printed.

90. Return to an order of the House of Commons, dated 20th February, 1905, for a statement showing the amount and nature of each and every claim that has been made by the firm of P. Lyall & Sons for extras in connection with their contract for the erection of steel sheds in the port of Montreal; and further indicating in each instance whether the claim has been admitted and approved by the Harbour Commissioners or their chief engineer; whether it has been recommended for payment by the government superintending engineer; and in case of dispute between the engineers, what decision the minister of marine and fisheries has given in each case; and the amount paid or agreed to be paid to the contractor in connection with each claim. Presented 10th March, 1905.—*Mr. Ames.*

Not printed.

90a. Return to an order of the House of Commons, dated 27th March, 1905, for copies of all correspondence between the Minister of Marine and Fisheries, or any officer of his department, and Mr. George S. Greene, junior, of New York, regarding the steel freight sheds of the harbour of Montreal; together with the report of the said George S. Greene, junior, upon the plans submitted to him for an opinion. Presented 12th April, 1905.—*Mr. Ames*..... *Not printed.*

91. Return to an order of the House of Commons, dated 1st February, 1905, showing: 1. The present indebtedness to the Dominion Government of the Montreal Turnpike Trust, (*a*) on capital account (*b*) for arrears of interest. 2. The amounts collected at each toll gate belonging to the said turnpike trust during the year ending 31st December, 1904. 3. The names of all parties who have commuted their tolls, and the amount of commutation paid in each case. 4. The amounts expended on each section or road division under the control of said trust, during the said year ending 31st December, 1904; and the contracts given out during the year, with the name of the contractor and the date

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and amount involved in each case. 5. The amounts paid out during the said year at each toll gate for salaries of day and night keepers, and other expenditure at each of the toll gates maintained. 6. The names of all parties holding passes for free use of the roads under the control of said trust during the said year. 7. The expenses of the said trust during the said year, for rent, salaries of the office, giving name and remuneration of each official. 8. The actual indebtedness in detail of the said trust outside of its bonds due to the government of Canada. 9. The amounts collected year by year since 1896 from municipalities under special agreements made as their share *pro rata* of the bonded indebtedness of the turnpike trust. Presented 15th March, 1905.—*Mr. Monk.*

Not printed.

92. Return to an order of the House of Commons, dated 6th February, 1905, for a statement showing the amounts expended from the 30th of June, 1902, up to the 1st of February, 1905, upon the two wharves and approaches at Ste. Genevieve and Isle Bizard, in the county of Jacques Cartier; also letters addressed to the minister of public works during the year 1904 in reference to the said expenditure, with estimates and statements connected therewith. Presented 16th March, 1905.—*Mr. Monk* ..... *Not printed.*

93. Return to an order of the House of Commons, dated 27th February, 1905, for copies of all thermograph records of temperatures taken on board Atlantic steamships during the calendar year 1903, stating: (1) name of steamship; (2) date when thermograph was put in chamber; (3) date when the steamer left the port; (4) whether chamber was (*a*) cold storage; (*b*) cool air; (*c*) mechanically ventilated; (*d*) ordinary, or whether the record was taken on deck or other place where the natural temperature of the air would be registered, unexposed to the sun's rays; (5) where practicable, in what part of the chamber the thermograph was placed. Presented 17th March, 1905.—*Mr. Henderson* ..... *Not printed.*

93*a*. Return to an order of the House of Commons, dated 20th March, 1905, of all the thermograph records used in the transportation of perishable products from Canada, in cold storage or ventilated storage, or cool air compartments. Also a copy of all contracts entered into between the government and any steamship company whereby the company receives a subsidy for installing cold storage or cool air ventilation or ventilated storage. Presented 17th May, 1905.—*Mr. Armstrong.*

Not printed.

93*b*. Supplementary return to 93*a*. Presented 6th June, 1905..... *Not printed.*

94. Return to an order of the House of Commons, dated 6th March, 1905, showing all leases of water power granted on the Welland Canal, not included in the return made to an order of the house dated 3rd April, 1901; the names of the lessees; the quantity of power granted in each lease; the consideration named in each lease, together with the length of the term granted, and the amount of rental reserved in such leases unpaid, if any. Presented 17th March, 1905.—*Mr. German.*

Printed for sessional papers.

95. Return to an order of the House of Commons, dated 13th February, 1905, showing what contracts for public works, or for supplies, have been awarded since July 1st, 1903, to other than the lowest tenderer, in the department of marine and fisheries, by the authority of the governor in council, in the manner set forth in clause 6 of the Act 55-56 Victoria, chapter 17. Also for the names and offers of all unsuccessful tenderers in every such case, and for the reasons why any such lowest tenderer was passed over. Presented 17th March, 1905.—*Mr. Lewis*..... *Not printed.*

96. Return to an address of the Senate, dated 1st March, 1905, for a copy of all correspondence between the government and the Ottawa corporation, relative to the formation of a federal district. Presented 17th March, 1905.—*Hon. Mr. Bernier*..... *Not printed.*

97. Statement showing areas of the provisional districts of the North-west Territories. Presented 20th March, 1905, by Hon. W. S. Fielding..... *Printed for both distribution and sessional papers.*

98. School ordinance, North-west Territories, being chapters 29, 30 and 31, passed 1901. Presented 20th March, 1905, by Hon. W. S. Fielding ..... *Not printed.*

99. Summary of legislation relating to subsidies to provinces. Presented 20th March, 1905, by Hon. W. S. Fielding ..... *Not printed.*

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100. Return to an order of the House of Commons, dated 20th February, 1905, showing the number of witnesses who appeared before the agriculture committee, whose expenses were paid by the government, for each year from 1890 to 1904 inclusive; the amount paid to each such witness; the name of each; where each came from when their attendance was required; and at whose instance each such witness was brought. Presented 22nd March, 1905.—*Mr. Wilson (Lennox and Addington).*

Not printed.

101. Return to an order of the House of Commons, dated 9th February, 1905, for copies of all correspondence had between the government, or any department or member thereof, and the Alexander Gibson Railway and Manufacturing Company, or any other corporation or corporations, or person or persons, not included in the return brought down on the twenty-ninth day of July, 1904, in reference to the purchase and taking over by the government of the Canada Eastern Railway; and of all other papers in the possession of the government, or any department thereof, not included in the said return of July, 1904, in reference to the purchase and taking over of the said railway, and the cost thereof. And also showing (1) the number of officials and employees in the service of the said railway at the time of its transfer to the government, with their names and their respective salaries or wages; (2) the number of officials and employees now in the service of the said railway, with their names and their respective salaries or wages; (3) the cost of the operation of the said railway from the date of its transfer to the government until the first day of February, 1905, and the gross earnings of the said railway during the same period. Presented 23rd March, 1905.—*Mr. Crocket.*

Not printed.

102. Return to an order of the House of Commons, dated 6th March, 1905, for copies of all petitions, memorials, and resolutions from the legislative assembly of Manitoba, the executive of that province, and any correspondence relative to the extension of the boundaries of Manitoba to the west or north. Presented 3rd April, 1905.—*Mr. Roche (Marquette).*

Printed for both distribution and sessional papers.

102*a*. Supplementary return to No. 102. Presented 5th April, 1905.

Printed for both distribution and sessional papers.

103. Return to an order of the House of Commons, dated 26th January, 1905, of copies of all correspondence had with the government or any member or official thereof, in reference to the building and location of a railway station in Charlottetown, Prince Edward Island; also report or reports or memorandum of any minister or official of the government, with reference to delegations from the province of Prince Edward Island, asking for the construction of such work. Presented 22nd May, 1905—*Mr. Martin (Queen's).* ..... *Not printed.*

104. Return to an order of the House of Commons, dated 20th February, 1905, for copies of all correspondence and documents relating to an application to the Board of Railway Commissioners, and relating to an application lately before the said board, by the towns of Port Arthur and Fort William, to obtain access for their municipal telephone system into the offices of the stations of the Canadian Pacific Railway in the two towns. And for copies of all correspondence between the said towns of Port Arthur and Fort William, and the officers thereof, with the government, with reference to such application, or prior or subsequent thereto. Also copies of any report or recommendation, decision or order made by the railway commissioners with reference to such application or applications, or incident thereto. Presented 5th April, 1905.—*Mr. Boyce*..... *Not printed.*

105. Return to an order of the House of Commons, dated 27th February, 1905, for a copy of the report of Mr. Matheson relating to the alleged fraud in payment of fishing bounties. Presented 5th April, 1905—*Mr. Ganong*..... *Not printed.*

106. Return to an order of the House of Commons, dated 27th February, 1905, showing the business done in the exchequer court of Canada, under its admiralty jurisdiction, since the Admiralty Act of 1891 came into force; giving by districts, (1) the number of actions instituted; (2-*a*) the number of interlocutory applications, and (*b*) trials; (3) the amount involved. Presented 6th April, 1905.—*Mr. Clarke (Essex).* ..... *Printed for sessional papers.*

107. Return to an order of the House of Commons, dated 13th March, 1905, for copies of all correspondence between the Department of Interior and Robert Buchanan, Peter Veregin, Simeon Rieben, and the Dominion Lands Office at Yorkton, or others, relative to the claim of Ivan Shukin to the patent for the northwest quarter section 23, township 31, R. 6, to 2nd M.; and to any cancellation proceedings in connection with the said land. Presented 7th April, 1905.—*Mr. Lake*..... *Not printed.*

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108. Return to an order of the House of Commons, dated 6th March, 1905, showing the number and location, cost and earnings, of the cold storage establishments called "Bait Freezers," of Maritime Canada; together with the returns, duly certified, of all such institutions, since 1900; the names and the salaries of all superintendents, officials and keepers of same; and the amounts in pounds of the different kinds of fish therein stored; the amount of bait from them used by *bona fide* fishermen, and the names of the same; together with all such information as may permit of the thorough examination of the question of government assisted refrigerators. Presented 11th April, 1905.—*Mr. Martin (Queen's)*..... *Not printed.*

109. Return to an address of the Commons, dated 20th February, 1905, for copies of all correspondence, telegrams, reports, writings, documents, memorials, orders in council, memoranda, or written or printed information of any kind not already down, which passed between the government of Canada, or of any minister or official thereof, and the government of Prince Edward Island, or of any member or official thereof, in any wise relating to the claim of the province of Prince Edward Island to a share of the Halifax fishery award. Presented 12th April, 1905.—*Mr. McLean (Queen's).*
Not printed.

109*a*. Supplementary return to No. 109. Presented 10th May, 1905..... *Not printed.*

110. Return to an order of the House of Commons, dated 20th February, 1905, for copies of all correspondence between the Department of Marine and Fisheries and Mr. A. E. Dyment, M.P.; and also between the Department of Marine and Fisheries and the late Commissioner of Fisheries for Ontario, the Honourable Mr. Latchford, during the past four years, regarding the granting of pound net licenses east of Little Current, Manitoulin Island, to Mr. T. H. Jackman, of Killarney, Ontario. Presented 12th April, 1905.—*Mr. Crocket*..... *Not printed.*

111. Return to an order of the House of Commons, dated 13th February, 1905, for a statement showing the amount of money expended by the Dominion government since the first day of July, 1873, for constructing, equipping, and subsidizing railways and canals, separately, in Canada; adding thereto the value of land given as subsidies, on the basis of one dollar value per acre; and adding further thereto the total estimated liability incurred by Canada on account of the building of the Grand Trunk Pacific Railway. Also a statement showing separately the part of such expenditure made or to be made as above, on railways and canals separately in each province of Canada, and the North-west Territories, deducting any sums that may have been charged any of the provinces or the North-west Territories in their debt account with the Dominion of Canada. Presented 12th April, 1905.—*Mr. Martin (Queen's)*..... *Printed for sessional papers.*

112. Return to an order of the House of Commons, dated 6th February, 1905, for a return of all lists of voters, as prepared by the enumerators, for the several polling subdivisions of the respective electoral districts in the North-west Territories, and used in the recent general election for the house of commons. Presented 17th April, 1905.—*Mr. McCarthy (Calgary)*..... *Not printed.*

112*a*. Return to an order of the House of Commons, dated 8th February, 1905, for a copy of the voters' lists for the constituency of Macdonald, Manitoba, supplied to the clerk of the crown in chancery prior to the general elections of 1904. Also for copies of the voters' lists supplied by the clerk of the crown in chancery to the returning officer for Macdonald constituency for the same elections. And for copies of voters' lists supplied to the various deputy returning officers by the returning officer in the constituency of Macdonald. Presented 27th April, 1905.—*Mr. Staples*..... *Not printed.*

112*b*. Return to an order of the House of Commons, dated 19th January, 1905, for a copy of the original list of the electors of Marquette supplied the clerk of the crown in chancery; also a copy of the list as sent to the returning officer; and for copies of the lists supplied by the returning officer to the various deputy returning officers. Presented 27th April, 1905—*Mr. Roche (Marquette).*
Not printed

113. Return to an order of the House of Commons, dated 20th February, 1905, showing the quantities of anthracite coal used in the several departments of the government of Canada, in the province of Quebec, New Brunswick, Nova Scotia and Prince Edward Island, in the years 1900, 1901, 1902, 1903 and 1904. Also of the total expenditure per year for said coal for each of the said provinces during said years; and separately, the names of the parties to whom paid, and the price per ton paid to each. Presented 17th April, 1905.—*Mr. McLean (Queen's)* ..... *Not printed.*

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114. Return to an order of the House of Commons, dated 27th March, 1905, showing the imports by provinces into Canada for home consumption from the United States; and the exports of the same from Canada to the United States; and the duty on the same, giving Canadian duty and the United States duty, for the years 1903 and 1904, on the following articles: pork, all kinds; apples, corn, beans—raw, canned and otherwise; tobacco, raw leaf; cattle, horses, wool, hides, sugar beets, hay, eggs, butter, fowls. Presented 25th April, 1905.—*Mr. Clements*.....*Not printed.*

115. Return to an order of the House of Commons, dated 6th March, 1905, showing in detail the various amounts expended during the past two years upon the wharf and abutments situated at Isle Bizard, in Jacques Cartier county, Quebec. Presented 27th April, 1905.—*Mr. Monk*.....*Not printed.*

116. Return to an order of the House of Commons, dated 20th March, 1905, for copies of all correspondence, telegrams, reports, estimates, and all other documents or information which passed between any minister or official of the government and engineers or others, with reference to the investigating or taking of soundings, or any other work for the purpose of ascertaining the best plan and place for the building of a pier or breakwater, in the vicinity of Carleton Point, or Cape Traverse, P.E.I., to establish and facilitate communication between Prince Edward Island and the mainland, winter and summer. Presented 27th April, 1905.—*Mr. Lefurgey*.....*Not printed.*

117. Return to an order of the House of Commons, dated 20th February, 1905, for copies of all reports made by Mr. Burley, or any other officer, in regard to reservations of water rights for stock purposes in the North-west Territories during the last five years. Presented 27th April, 1905.—*Mr. Roche (Marquette)*.....*Not printed.*

118. Return to an order of the House of Commons, dated, 27th February, 1905, for copies of all correspondence, letters, reports, petitions, memoranda, in possession of the government, or any member or official thereof, relating to the location and erection of a railway station at Grand View, on the Murray Harbour branch of the Prince Edward Island Railway. Presented 28th April, 1905.—*Mr. Martin (Queen's)*.....*Not printed.*

119. Return to an order of the House of Commons, dated 20th February, 1905, showing the sums of money spent by the Dominion government since 1896 upon each of the following: (*a*) Port Arthur harbour; (*b*) Fort William harbour; (*c*) Kaministiquia river; classified into (1) dredging; (2) breakwaters; (3) other purposes. The quantities of each of the following to be excavated during 1905-6 in each of the three locations above named: mud and sand, clay, hardpan, rock. The dates and terms of the contracts entered into with those engaged in dredging at the aforesaid points in 1903-04 and 1904-05. The said contracts. The horse-power, tonnage and dimensions of each of the dredges engaged in said work. The cost of dredges newly built, similar to those engaged at the above three points. Presented 28th April, 1905.—*Mr. Hughes (Victoria)*.....*Not printed.*

120. Return to an order of the House of Commons, dated 13th March, 1905, for each of the fiscal years from 1st July, 1897, to 30th June, 1904, of the expenditure on capital account upon the Drummond Counties Railway, and of the descriptions of work and materials for which such expenditure was made. Presented 9th May, 1905.—*Mr. Foster*.....*Not printed.*

121. Return to an order of the House of Commons, dated 20th February, 1905, showing in tabular form the amounts first voted for public buildings in towns in Canada of not more than 5,000 inhabitants; the year in which the first amount was in each case voted; the total amount expended to complete each building; the year in which it was completed; the revenue derived from post office, customs and inland revenue, separately, for the year in which the first vote was taken, and the rentals paid for the buildings in use for the above services during the same year, and the population of each town for that year; said return to cover the period from January, 1888, to February, 1905, inclusive. Presented 19th May, 1905.—*Mr. Foster*.....*Not printed.*

122. Return to an order of the House of Commons, dated 26th May, 1905, of copies of correspondence, etc., in relation to the Thessalon post office. Presented 26th May, 1905.—*Sir William Mulock.*
Not printed.

123. Return to an address of the House of Commons, dated 27th February, 1905, for copies of all petitions and correspondence between the boards of trade of Toronto and Montreal respectively, and the governor in council, in reference to the appointment of grain survey boards, under the authority of the Grain Inspection Act, at Toronto and at Montreal; and for copies of the orders in council whereby the aforesaid appointments were made. Presented 6th June, 1905.—*Mr. Ames.*
Not printed

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124. Return to an address of the House of Commons, dated 27th March, 1905, of the following documents in respect of payments made on account of the subsidy voted in 1901 for a line of railway between Caplin and Paspebiac: 1. Copy of authority to act, together with full instructions issued to Commissioner Mothersill. 2. Report and findings of Commissioner Mothersill. 3. Sworn evidence of claimants who appeared before Commissioner Mothersill, as taken down by Stenographer Roy. 4. Copy of authority to act, and full instructions to Commissioner Langelier. 5. Report and findings of Commissioner Langelier. 6. Sworn evidence, if any, of claimants appearing before Commissioner Langelier. 7. Affidavits presented to Commissioner Langelier and subsequently. 8. Copy of resolution or order in council adopting report of Commissioner Langelier. 9. A statement giving each of the several payments made by the government since July 1st, 1901, on account of the subsidy voted in 1901 for a line of railway between Caplin and Paspebiac; showing in respect of every such payment to whom, by whom, on what date, in connection with part of the road, the date of original filing of claim, and on whose recommendation each payment was made. 10. All correspondence which may have passed between the Department of Railways and Canals, or any person connected therewith, and Commissioner Langelier, in respect of the investigation and payment of said claims. Also all correspondence between the member for the county of Bonaventure and the department, and between said member and Commissioner Langelier on this subject, as well as by the trustees of the Atlantic and Lake Superior Railway, C. N. Armstrong, T. C. Casgrain, H. C. J. Gilendez or any other person on their behalf and the department. Presented 15th June, 1905.—*Mr. Ames*.....*Not printed.*

125. Return to an order of the House of Commons, dated 13th March, 1905, for copies of all correspondence, letters, petitions, etc., in possession of the government, or any member or official thereof, relating to land damages claimed by Thomas Curley, Charles Mitchell and others, of Village Green, Prince Edward Island, for lands expropriated for the Murray Harbour branch of the Prince Edward Island Railway. Presented 30th June, 1905.—*Mr. McLean (Queen's)*.....*Not printed.*

126. Return to an address of the House of Commons, dated 13th February, 1905, for copies of all correspondence and despatches between the government of Canada and the Imperial government, in regard to the establishment of a branch of the Royal Mint in Canada. Presented 4th July, 1905.—*Mr. Monk*.....*Not printed.*

127. Copy of the account of the counsel and the expert witness as certified to by the chairman of the select special committee appointed last session to investigate the position of the Mutual Reserve Fund Life Association of New York in Canada. Presented (Senate) 28th June, 1905, by Hon. R. W. Scott. *Not printed.*

127*a*. Letter from C. J. Coster to the Clerk of the Senate, acknowledging a receipt of a cheque for $500 on account of counsel fees in connection with the special committee on the Mutual Reserve Fund Life Association of New York, and also a letter from A. Power, acting Deputy Minister of Justice, referring to a number of accounts submitted to the Department of Justice for taxation in connection with the investigation of the said committee. Presented (Senate) 29th June, 1905, by Hon. R. W. Scott.....*Not printed.*

128. Return to an address of the House of Commons, dated 13th March, 1905, for copies of all correspondence, orders in council, agreements, reports, etc., in connection with the taking over by the Dominion government of the Halifax and Esquimalt defences. Presented 7th July, 1905.—*Mr. Foster*.....*Printed for both distribution and sessional papers.*

129. Return to an order of the House of Commons, dated 27th March, 1905, for copies of all correspondence, telegrams, papers, memoranda, etc., between the government and members of the Canadian militia, in regard to the granting of the King's South African medal to Canadians doing 18 months' South African war service Presented 10th July, 1905.—*Mr. Worthington*.....*Not printed.*

130. Return to an order of the House of Commons, dated 10th July, 1905, for a copy of the memorandum from the members of the Militia Council to the Minister of Militia and Defence; and also a copy of the memorandum of the Minister of Militia and Defence relating to the militia estimates. Presented 10th July, 1905.—*Sir Frederick Borden*..*Printed for both distribution and sessional papers.*

131. Return to an order of the House of Commons, dated 6th March, 1905, showing the names of residents in the North-west Territories, not entitled to a second homestead, for whom the sanction of the department has been given, allowing them to purchase additional quarter sections, subject to ordinary cultivation conditions; the dates upon which such sanctions were given; the lands which

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have been purchased by such settlers in consequence of this authority, with the price agreed upon, and the sum paid down; also the form in which the authority to make the sale was made known to the local agents of Dominion lands. Presented 10th July, 1905.—*Mr. Lake*.....*Not printed.*

132. Partial return to an order of the House of Commons, dated 13th March, 1905, showing: (1) the number of permanent appointments, male and female, respectively, made to the civil service (inside division) in Ottawa, since July 1st, 1896; (2) the present strength of the civil service in Ottawa (inside division) permanent staff, specifying whether male or female; (3) the number of temporary employees, male or female, on the pay-list for the inside division of the civil service at Ottawa for January, 1905; (4) the number of temporary employees, male and female, appointed since July 1st, 1896; (5) in addition to the permanent and temporary clerks at present employed in the public service in Ottawa, the number of artisans, labourers, or other workmen employed at Ottawa during the month of January, and showing to which department these men are attached. Presented 10th July, 1905.—*Mr. Sproule*.....*Not printed.*

133. Rules of the Supreme Court of Prince Edward Island in criminal cases Presented (Senate) 10th July, 1905, by The Speaker.....*Not printed.*

134. Return to an address of the House of Commons, dated 27th March, 1905, for copies of all correspondence, telegrams, letters, memoranda, orders in council, reports, etc., in possession of the government, or any member or official thereof, in connection with the granting of an additional subsidy to the province of Prince Edward Island, in 1901, of $30,000 a year, and the basis on which the said subsidy was agreed to be paid to the province. Presented 11th July, 1905.—*Mr. Martin*..*Not printed.*

135. Return to an address of the Senate, dated 6th July, 1905, showing: 1. The amount (acreage) of school lands sold in the North-west Territories since the union. 2. The amount of principal (if any), and also the amount of interest paid over to the Territorial government. 3. The amount (acreage) of lands sold, and the average price per acre in each year for which such lands were sold. 4. The amount at present standing to the credit of the school fund. 5. The amount owing on sales to be carried to the credit of said fund. Presented 12th July, 1905.—*Hon. Mr. Lougheed*....*Not printed.*

136. Return to an order of the House of Commons, dated 13th February, 1905, for copies of all correspondence, petitions, resolutions, reports, memoranda, in possession of the government, or any member thereof, relating to the survey and construction of branch railway lines in the province of Prince Edward Island. Also the number of surveys made in the province since 1900, the routes surveyed, and the cost of each. Presented 14th July, 1905.—*Mr. Martin (Queen's)*....*Not printed.*

137. Return to an order of the House of Commons, dated 14th July, 1905, for a copy of the details of the third item of Resolution 107 of the Supplementary Estimates, 1905-6: Construction of lighthouses and aids to navigation, including apparatus, $675,000. Department of Marine and Fisheries. Presented 14th July, 1905.—*Hon. J. R. F. Préfontaine*.....*Not printed.*

138. Return to an order of the House of Commons, dated 14th July, 1905, for a copy of the report of Superintendent J. D. Moodie, on service in Hudson Bay, per ss. *Neptune*, 1903-4. Presented 14th July, 1905.—*Hon. J. R. F. Préfontaine*.....*Printed in Sessional Paper No. 28.*

139. Extracts of reports of committees of the honourable the privy council, approved by his excellency on the 31st May, 1902, and 20th September, 1904, respectively, relative to the carrying out of a certain propaganda in certain European countries to promote emigration to Canada by the North Atlantic Trading Company of Amsterdam, Holland. Presented 19th July, 1905, by Hon. F. Oliver.
Not printed.

140. Report of W. M. Graham, inspector of Indian agencies in the Assiniboine agency, and also in the Moose Mountain agency. Presented 19th July, 1905, by Hon. F. Oliver.....*Not printed.*

141. Correspondence respecting the sale of certain disputed islands in the Georgian Bay, south of Moose Deer Point. Presented 19th July, 1905, by Hon. F. Oliver.....*Not printed.*

142. Copy of an indenture between His Majesty King Edward the Seventh and the Dominion Coal Company, Limited. Presented 19th July, 1905, by Hon. F. Oliver.....*Not printed.*

143. Return to an address of the Senate, dated 7th July, 1905, for a return of the number of closed grazing leases granted since 1897 by the government of the North-west Territories, together with the following information relating thereto: The number of acres in each lease, the date when, and time for which granted; the parties to whom granted, and by whom at present held; the rental per acre, and the township and range in which situate. Presented 14th July, 1905.—*Hon. Sir Mackenzie Bowell*.....*Not printed.*

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144. Return to an address of the Senate, dated 6th April, 1905, for copies of all despatches, letters, telegrams and other correspondence and communications received by the department of public works, or any officer thereof, or by any department of the government, or by any officer thereof, from the Honourable Senator Philippe Auguste Choquette in any way relating to lot 4438-A of the official plan and book of reference of Montcalm Ward, of the city of Quebec, and to the purchase thereof by His Majesty King Edward VII, and of all despatches, letters, telegrams and other correspondence and communications sent by any and all such departments and officers to the Honourable Senator Choquette relating thereto; also copies of all plans, if any, filed for the purpose of expropriating said lot in the registration division wherein said lot is situate, and copies of any other expropriation proceedings authorized or required by law to be followed in connection with the expropriation of lands for public purposes and which in any way relate to the lot aforesaid; copies of all appointments of valuators regarding said lot; copies of all applications for the appointment of such valuators, and of all correspondence, letters and telegrams relating to such appointments; and copies of any valuations of said lot made by any valuators; copies of all orders in council relating to said transactions and to the purchase of said property; copies of all deeds, powers of attorney, reports and orders in council executed, made or passed relating to the purchase or acquisition of said lot by His Majesty King Edward VII. Presented 18th July, 1905.—*Hon. Mr. Landry*.....*Not printed.*

145. Return to an address of the Senate, dated 16th May, 1905, for copies of all correspondence between Henry F. Coombs, of St. John, N.B., and the department of agriculture of Canada, or any officer thereof, relating to articles forwarded by the said Henry F. Coombs to the Paris exhibition, in 1900, and his claim for expenses in connection therewith and for payment to him for articles damaged or not returned. Presented 19th July, 1905.—*Hon. Mr. Landry*.....*Not printed.*

146. Return to an address of the Senate, dated 14th June, 1904, for: 1. A statement showing, in so many distinct columns, the names and surnames, the age, rank, the domicile, the origin, of all the officers, sub-officers and men of the crew of the ship sent in 1903 to explore Hudson's Bay. 2. The name of the ship chartered for this expedition, its tonnage, the name of its owner, the price assigned for its service, the duration of this service. 3. The term of service of each of the men (officers, sub-officers, sailors, etc.) who composed the crew of this vessel. 4. All the correspondence relating to this expedition, including therein the instructions given. 5. A copy of each report made by the authorities on board from the commencement of this expedition. Presented 18th July, 1905.—*Hon. Mr. Landry*.. ..... *Not printed.*

147. Orders in council passed since last session, submitted for the approval of parliament, in accordance with provisions of section 5 of chapter 34, of the Statutes of Canada, 1902. Presented 18th July, 1905, by Hon. F. Oliver..... .....*Not printed.*

CANADA

REPORT

OF THE

MINISTER OF PUBLIC WORKS

ON THE

WORKS UNDER HIS CONTROL

FOR THE FISCAL YEAR ENDED JUNE 30

1904

SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 36 SECTION 37, OF THE REVISED STATUTES OF CANADA

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1905

[No. 19—1905.]

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, G.C.M.G., &c., &c., Governor General of Canada.

My Lord,

I have the honour to lay before Your Excellency the Report of the Department of Public Works of Canada, for the Fiscal Year ended June 30, 1904.

I have the honour to be,

My Lord,

Your Excellency's most obedient servant,

CHAS. S. HYMAN,

Acting Minister of Public Works.

Ottawa, February 6, 1905.

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Dundee, P.Q., custom house		8, 29					
Dunbains, N.B.		18					
E							
East Bay, N.S.		14		20			
East Berlin, N.S.		14		21			
East Chezzetcook, N.S.		14					
East Jeddore, N.S.		14		21			
East River, N.S.		14					
East Templeton, P.Q.		19					
East Selkirk, Man., immigration building		11					
Eboulements, P.Q.		19					
Echouries, P.Q.				111			
Economy, N.S.		14		21			
Edgetts Landing, N.B.		17		85			
Edmonton, N.W.T., bridge		25		250			
" public buildings		12, 32			15		
Edmundston, N.B.		19		99			
Employees, graving docks							33
" salaries of		27					
" slides and booms							29
Engineers, firemen, &c.							35
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" staff (salaries) &c.		27					
English River, P.Q.		19		132			
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Escuminac, N.B., telegraph		25			10		
Esquimalt, B.C., graving dock		24		238		6, 13	
" custom house		37					
Expenditure	4	23			20		
F							
Fairford River, Man.				166			
Farnham, P.Q., public building		9, 29					
Father Point, P.Q.		19		111			
Finlay's Point, N.S.		14		22			
Five Islands, N.S.		14		22			
Flewelling, N.B.		18					
Flints Landing, P.Q.		22					
Fort Dufferin, N.B.		18		85			
Fort Lorne, N.S.		14		23			
Fort William, Ont., public building		10, 30					
" dredging				216			
Fraser River, B.C.		24		171			
Fraserville, P.Q., public building		8, 29					
Fredericton, N.B., "		8, 28	4				
Frenchmen's Bay, Ont.		23		156			
Friar's Head, N.S.		14		23			
Fruids Point, N.S.		14		23			
G							
Gabarus, N.S.				24			
Gagetown, N.B.		17		179			
Galt, Ont., public building		10, 30					
Gananoque, Ont, public building		10, 30					
" harbour		22		216			
Gaspereau, P.E.I.		16					
Gatineau River, slide		24		241			
" P.Q.		19					
Georgeville, P.Q.		19		112			
" N.S.		14		24			

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Georgian Bay, Ont		22					
" Canal survey	10						
Gimli, Man		23		166			
Goderich, Ont., harbour		22		146			
" public building		10, 30					
Golden, Windermere, telegraph		26			17, 39		
Gores Landing, Ont		22		147			
Graham, P.Q		19		212			
Graham's Pond, P.E.I				72			
Granby, P.Q., public building		9, 29					
Grand Bend, Ont		22		147			
Grande Anse, N.B		17		86			
Grandes Bergeronnes, P.Q		19, 20		112			
Grande Décharge, P.Q		19		115			
Grand Entry, P.Q		20		112			
Grand Etang, N.S		14		24			
Grand Falls, N.B		17		96			
Grand Narrows, N.S		14		25			
Grand Lake, N.B		17		180			
Grands Mechins, P.Q		19					
Grand River, Ont., bridge		25		148			
" " dredging		22		147			
" N.S		14		26			
" P.E.I				72			
Grande Rivière, P.Q		19		112			
Grande Vallée, P.Q		19					
Granville Centre, N.S		14		26			
Gratuities paid		27					
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Great Tancook Island, N.S		14					
Green Cove, N.S		14		26			
Grenville, P.Q				212			
Grenfell, N.W.T		32					
Green River, P.Q				112			
Grindstone, P.Q		20		113			
Grondines, P.Q		19		113			
Grosse Isle, P.Q., quarantine		8	8		30		
Guelph, Ont., public building		10, 30					
Gull Harbour, Man		23		166			
Guysboro', N.S., public building		7, 28					
H							
Haileybury, Ont				148			
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Halifax, N.S., public building		7, 28	3				
" graving dock		14					
Hamilton, Ont., public building		10, 30					
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Harbourville, N.S		14		28			
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Hawke Point, N.S		14		28			
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" public buildings		10					
Hawkestone, Ont				148			
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" wharf		19		114			
Humphreys Point, N.B.	18						
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Iberville, P.Q.		19		114			
Icelandic River, Man.		23		167			
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Ingonish, N.S. (North)		14		45	8		
Iona, N.S.		14		30			
Iroquois, N.B.		17					
Island Point, N.S.		14		30			
Isle aux Coudres, P.Q., telegraph		25			14		
" " harbour		19		115			
Isle Perrot, P.Q.		19		115			
Isle Verte, P.Q.		19		115			
J							
Janvrins Island, N.S.		14		31			
Jenkins Cove, N.B.		18					
Joliette, P.Q., public building		8, 29					
Judique, N.S.		14		31			
K							
Kaministiquia River, Ont.				216			
Kamloops, B.C., public building		12, 33					
Kamloops-Nicola, telegraph		26			17, 37		
Kamouraska, P.Q.		19		115			
Kaslo, B.C., drill hall		12, 33					
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Kentville, N.S., public building		7, 28					
Kincardine, Ont.		22		149			
Kingsport, N.S.		14		32			
Kingston, Ont., harbour		22		216			
" graving dock		22		238		6, 15	
" public buildings		10, 30					
Kingsville, Ont.		22		150			
Knights Point, P.E.I.		16		75			
Knowlton's Landing, P.Q.		19		116			
L							
Lachine, P.Q., public building		8, 29					
Lacombe, N.W.T., immigration building		32					
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Lake Francis "		23		232			
Lake Manitoba "		23		166			
Lake Megantic, P.Q.		19		116			
Lake Nominingue, P.Q.		19		120			
Lakeport, Ont.				150			
Lake Simcoe and Couchiching, Ont.		22					
Lake St. John, P.Q.		19					
Lake St. Peter, P.Q.	12			259			
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Lancaster, Ont.		22		150			

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Laprairie, P.Q		19		116			
" public building		8, 29					
L'Ardoise, N.S		14		32			
Larry's River, N.S		14		33			
L'Assomption, P.Q		19		212			
" " public building		8, 29					
Laurier bridge, Ottawa		25		249			
Lawlor's Island, N.S., quarantine station		7	3				
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Lethbridge, N.W.T., public building		12, 32					
" " bridge		25					
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" public building		8, 29	8				
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Lighting, public buildings		28					
Lindsay, Ont., public buildings		10, 30					
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Lismore, N.S		18		8			
L'Ile d'Alma, P.Q		19					
L'Islet, P.Q		19		117			
Little Bear Creek, Ont		22		151			
Little Fox River, P.Q		20					
Little Forks, N.B		17					
Little Harbour, N.S		14		34			
Little Salmon River, N.B		17		88			
Little Tobique, N.B		17					
Little Valley, P.Q		20					
Liverpool, N.S., harbour		15		178			
" " public building		7, 28					
Livingston Cove, N.S		15		31			
Lloydminster, N.W.T		12					
Lockport, N.S		15		34			
Loggieville, N.B		17		79			
Longueuil, P.Q., public building		8					
London, Ont., public buildings		10, 30					
Lord's Cove, N.B		17		88			
L'Orignal, Ont		22		151			
Lotbinière, P.Q		19		118			
Lower Montague, P.E.I		16					
Lower St. Lawrence piers		19					
Lower Washabuck, N.S		15		35			
Lower West Pubnico, N.S		15		35			
Lunenburg, N.S., public building		7, 28					
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McCracken's Landing, Ont		22		151			
McGowans, N.B		18					
McGregor's Creek, Ont		22		152			
McKay's Point, N.S		15		38			
McNair's Cove, N.S		15		39			
McNutt's Island, N.S		15		39			
Malou, N.S		15		178	27		
Macleod, N.W.T., public building		12, 32					
Madawaska River, slide		24		242			
" N.B		17					
Magdalen Islands, P.Q		20			9, 25		
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Main River, N.B.		17					
Malagawatch, N.S.		15		36			
Malignant Cove, N.S.		15		36			
Manitoba, dredging		23		232			
" harbours and rivers	9	23		166			
" public buildings		11, 31					
Maple Creek, N.W.T., court house		32					
Marconi—wireless telegraphy					20		
Margaree Harbour, N.S.		15		37			
Margaretville, N.S.		15		38			
Maria, P.Q.		20		118			
Maria Street bridge, Ottawa		25		249			
Maritime Provinces, dredging		14					
" public buildings		7, 28					
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Marysville, N.B., public building		8, 28	5				
Matane, P.Q.		20		118			
Meaford, Ont.		22		152			
Medicine Hat, N.W.T., public building		12, 32					
Melburne, N.S.		15		40			
Meteghan Cove, N.S.		15		40			
Meteghan River, N.S.		15		41			
Middleton, N.S., armoury		7					
Middle River, N.S.		15		43			
Midland, Ont.		22		152			
Miminigash, P.E.I.		16		73			
Minnidosa, Man., lands office		32					
Minudie, N.S.		15					
Miramichi, N.B.		17					
Miscou, N.B.		17		88			
Mispec, N.B.		17		89			
Mistook, P.Q.		20		119			
Moisie Post Road, P.Q.		25					
Moncton, N.B., public building		8, 28					
Monetville, Ont.		22		153			
Montague, P.E.I., public building		7, 28					
Montebello, P.Q.		20		212			
Mont Louis, P.Q.		20		119			
Montmagny, P.Q., public building		8, 29					
" wharf		20		119			
Montreal, P.Q., public buildings		8, 29	9				
" harbour	9	20		120			
Morrel, P.E.I.		16					
Moose Jaw, N.W.T., public buildings		12, 32					
Moosomin, N.W.T. "		12, 32					
Morpeth, Ont.		22		153			
Mount Julien, Ont.		23		153			
Musquodoboit, N.S.		15		43			
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Nadeau, A., gratuity		26					
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Nanaimo—Comox, telegraph		26			17, 38		
Napanee, Ont., public building		10, 30					
Nappan, N.S., experimental farm		7					
National Art Gallery, Ottawa		10, 30					23
Necum Teuch, N.S.		15		43			
Negro Point, N.B.		18		90			
Negnac, N.B.		17		180			
Neil's Harbour, N.S.		15					
Nelson, B.C., public building		12, 33					
New Brunswick, dredging		17					
" harbour		17		77			
" public buildings		7, 28	4				
" telegraphs		25					

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" public building		8, 28					
Newcastle District, slides		24		246		6, 12	
Newcastle, Ont		23		153, 217			
Newfoundland, telegraph		25			6, 23		
New Glasgow, N.S., public building		7, 28					
New Harbour, N.S		15		44			
Newelton, N.S.		15		44			
New Liskeard, Ont		23		217			
New London, P.E.I		12		73			
Newmarket, Ont., post office		30					
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New Richmond, P.Q		20					
New Westminster, B.C., public bldgs		12, 33	22				
Niagara Falls, Ont, public building		10, 30					
Nicolet, P.Q		20		212			
North Bay, Ont		23					
North Cardigan, P.E.I		16		74			
North Gut, St. Ann's, N.S		15					
North Head, N.B		17					
" post office		8					
North River, N.S		15		45			
North Shore, St. Lawrence, telegraphs		25			10, 32		
North Sydney, N.S., public building		7, 28					
North Thomson, river, B.C		24					
North-west Territories, bridges		25		250			
" public buildings		12, 32	21				
" telegraphs		26			15, 36		
Notre-Dame du Lac, P.Q		21		121			
Notre-Dame du Portage, P.Q		20					
Nova Scotia, dredging		14					
" harbour		14		6			
" public buildings		7, 28	3				
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Oakville, Ont		23		154			
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Officers employed on graving dock							33
" " slides and booms							29
Ogden's Pond, N.S		15		46			
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Ontario, bridges		25		250			
" dredging		22					
" harbours		22		141			
" public buildings		9, 29	12				
" telegraphs		25			14, 35		
Orangeville, Ont., public building		30					
Orillia, Ont., public building		10, 30					
" harbour		23		154			
Oromocto, N.B		18		180			
Oshawa, Ont., public building		10					
" harbour		23					
Otonabee River, Ont		23		246			
Ottawa, Art gallery		10, 30					23
" buildings and grounds		10, 30	13				
" government house		10, 30	14				
" experimental farm		10, 30	13				
" Major's Hill Park		10, 30	16				
" observatory		10, 30	17				
" post office		10, 30	16				
" printing bureau		10, 30	17				
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Parliament buildings, Ottawa		10, 30	13				
Parrsboro, N.S		15		47			
Parry Sound, Ont		23					
Partridge Island, N.B., quarantine		8		5			
" wharf		17		92			
" N.S		15					
Paspebiac, P.Q		20		121			
Pelee Island, Ont., wharf		23		155			
" telegraph		25			14, 35		
Pembroke, Ont		23					
" public building		10, 31					
Pembroke, N.S		15		47			
Penetanguishene, Ont		23		155			
Percé, P.Q		20		121			
Peribonca, P.Q., public building		9, 29					
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Peterborough, Ont., public building		11, 31					
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Petewawa River, slides		24		242			
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Petites Bergeronnes, P.Q		20		107, 122			
Petite Rivière, P.Q		20		122			
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Petites Tourelles, P.Q		20		122			
Petrolea, Ont., public building		11, 31					
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Pickering, Ont		23		156			
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Picton, Ont., public building		11, 31					
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Pictou, N.S		15		48, 177			
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Pinkneys Point, N.S		15		49			
Pleasant Bay, N.S		15					
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Pointe aux Esquimaux, P.Q		20		123			
Pointe aux Trembles, P.Q		20		123			
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Point Edward, Ont		23		156			
Point Edward, N.S., quarantine		7					
Point Fortune, P.Q		20		123			
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Pointe St. Pierre, P.Q		20					
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Portage du Fort, bridge		25		250			
Portage la Prairie, Man., public building		11, 32					
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Port Elgin, Ont.		23		160			
Port George, N.S.		15		50			
Port Greville, N.S.		15		51			
Port Hawkesbury, N.S.		15		52			
Port Hood, N.S.		15		52, 178			
Port Hope, Ont		23		160, 218			
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Port Latour, N.S.		15		53			
Port Maitland, N.S.		15		54			
Port Morien, N.S.		14		15			
Portland, N.B., public building		8					
Port Phillip, N.S.		15		53			
Port Stanley, Ont		23					
Poulamond, N.S.		15		55			
Prescott, Ont., public building		11, 31					
" dredging		23					
Prince Albert, N.W.T., public building		12, 32					
Prince Edward Island, dredging		16					
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" public buildings		7	28				
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Qu'Appelle, N.W.T., court house		32					
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" bridges		25		250			
" harbours, &c		18		104			
" public buildings		8, 29	8				
" telegraphs		25			21		
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" wharf		20		124			
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Rat Portage, Ont., public building		11, 31					
Red Deer, N.W.T., pub. buildings		12, 32	21				
Red Head, N.S.		15		57			
Red River, Man.		23					
Red Store Wharf, N.B.		17					
Regina, N.W.T., public buildings		12, 32	21				
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" paid		28					
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" wharf		17		94			
" river		17		181			
Richmond, P.Q.		21		125			
Richmond, P.Q., public building		9, 29					
Richmond Bay, P.E.I.		16					
Rideau, Hall, Ottawa		10, 30					
Rigaud, P.Q.		20		213			
Rimouski, P.Q., public building		9, 29					
" wharf		23		126			
River Kaministiquia, Ont		23					
" Thames, Ont.		23					
" St. Francis, P.Q.		21					
" St. John, N.B.		17		95			
" St. Lawrence		20, 23		259			
" St. Louis, P.Q.		21		214			
" St. Maurice, dredging		21		247		5, 11	
" St. Maurice, slides, &c		24					
Rivière aux Renard, P.Q.		20					
" " Puces, Ont.		23		160			
" Batiscan P.Q.		20		211			
" Blanche, P.Q.		20					
" Chateauguay, P.Q.		21		211			
" du Lièvre, P.Q.		21		126, 238		6	
" du Loup, P.Q.		21		126			
" Jésus, P.Q.		21		213			
" Ottawa		20, 23					
" Ouelle, P.Q.		21		127			
" Richelieu		21		127			
" Verte		21					
" Saguenay, P.Q.		21					
" St. Anne, P.Q.		20					
Rocher Noir, P.Q.		20					
Roads and bridges		25		249			
Roberval, P.Q., immigration building		9, 29					
" wharf		19, 21		128, 213			
Robbins Landing, Ont.		23		161			
Rosedale, Ont., wharf		23		161			
Rossland, B.C., public buildings		12, 23	22				
Rosthern, N.W.T., public buildings		12, 32					
Rondeau, Ont.		23		161, 218			
Rustico, P.E.I.		16					
Russell, James, gratuity		26					
Ryan, Thomas,		26					
S							
St. Alexis, P.Q.		21		129			
St. Alphonse, de Bagotville, P.Q.		21		130			
St. André de Kamouraska, P.Q.		21		131			
St. Andrews, P.Q.		21		213			
St. Andrews Rapids, Man	9	23		167			
Ste. Anne de la Pérade, P.Q.		21		136			
Ste. Anne de la Pocatière, P.Q.		21		136			
Ste. Anne des Monts, P.Q.		21		137			
Ste. Anne de Sorel, P.Q.		21		136			
Ste. Anne du Saguenay, P.Q.		21		137			
St. Antoine, P.Q.				214			
St. Blaise, P.Q., dredging				214			
St. Catharines, Ont., public building		11, 31	19				
St. Denis, P.Q.		21					
St. Eustache, P.Q., post office		29					
Ste. Emélie, P.Q.				138			
Ste. Famille, P.Q.		21		138			
St. Félicien, P.Q.		21		131			
St. Fidèle, P.Q.		21		131			
St. Francis River, N.B.		17					

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S							
St. Francis River, P.Q.		21		125			
St. François, P.Q.		21		132			
St. Fulgence, P.Q.		21		132			
St. Gédéon, P.Q.		21		132			
Ste. Geneviève, P.Q.		21		138			
St. Godfroid, P.Q.		21					
St. Henri, P.Q., public building.		9, 29					
St. Hyacinthe, P.Q., public building		9, 29	10				
St. Irénée, P.Q.		21		132			
St. Jean, Ile d'Orléans.		21		133			
St. Jean de Chaillons, P.Q.		21		214			
St. Jean Chysostôme, P.Q.		19		132			
St. Jean Port-Joli, P.Q.		21		133			
St. Jérôme, P.Q., public building		9, 29					
" wharf		21		133			
St. John River, N.B.		17		95			
St. John harbour, N.B.,		18		180,181			
" N.B., public buildings		8, 28	6				
St. Johns, P.Q. "		9, 29					
" " wharf		21		214			
St. Joseph, Ont		23		162			
St. Laurent, Ile d'Orléans		21					
St. Louis du Mile End, P.Q.		9					
St. Marc, P.Q.		21		134			
St. Mathias, P.Q.		21		134			
St. Maurice River, dredging.		21		214			
" slides, &c		24		247		5, 11	
St. Méthode, P.P		19		140			
St. Michel de Bellechasse, P.Q		21		134			
St. Nicholas, P.Q.		21		135			
St. Nicholas River, N.B.		18					
St. Peters, N.S., telegraph		25			6		
St. Peters Bay, P.E.I		16		74			
St. Roch, P.Q., public building		29					
St. Roch des Aulnaies, P.Q.		21					
St. Siméon, P.Q.		21		135			
St. Stephen, N.B., public building		8, 28					
St. Thomas, Ont., public building.		11, 31					
St. Valentin, P.Q.		21		135			
St. Zotique, P.Q.		21		136			
Sabrevois, P.Q.		21		128			
Sacré-Cœur, P.Q.		21		113			
Saguenay River, telegraph		25					
Salmon River, N.B		17					
Salmon River, B.C.		24					
Saltcoats, N.W.T., immigration shed		12					
Sandy Cove, N.S		15		57			
Sarnia, Ont., public building.		11, 31					
" dredging		23		162			
Saskatoon, N.W.T., immigration building		12, 23					
Sault Ste. Marie, Ont., wharf	8	23		162			
" public building		11					
Scotts Bay, N.S.		15		57			
Secretary's staff, salaries		26					
Selkirk, Man., immigration building.		11, 32					
Selkirk, Man., wharf		23		167			
Seven Islands, P.Q.		21		110			
Sewell, N.B.		18					
Shag Harbour, N.S		15		58			
Sherbrooke, P.Q., public buildings		9, 29					
Shegawake, P.Q		21		138			
Ship Channel, St. Lawrence	13	20		259			
Shippegan, N.B.		18		100			
Ship yard, Sorel, P.Q	12			271			
Short Beach, N.S.		15					
Sidney, B.C.		24		173			
Sight Point, N.S.		15					
Skeena River, B.C.		24		173			

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S							
Slides and booms		24		240			
" dues						8	
" officials							29
Smith's Falls, Ont., public building		11, 31					
Sorel, P.Q., public buildings		9, 29					
" harbour		21		139			
" ship yard	12			271			
Souris, P.E.I		16		75			
South Gut, N.S		15		58			
South Ingonish, N.S		15		59			
Spallumachine, B.C		24		174			
Springhill, N.S., public building		7, 28					
Springhill, N.B		18		181			
Spry Bay, N.S		15		59			
Stonehaven, N.B		17		84			
Stratford, Ont., public building		11, 31					
Strathcona, N.W.T., immigration building		12, 33					
Strathroy, Ont., public building		11, 31					
Sturgeon Falls, Ont		23		162			
Sturgeon Pier, P.E.I		16		75			
Summerside, P.E.I., harbour		16					
" public building		7, 28					
Superintendent of telegraphs	15				1		
Surveys and inspections		24		4			
Sussex, N.B., public buildings		8, 28	5				
Swims Point, N.S		16		60			
Sydenham River, Ont		23		163			
Sydney, N.S., public building		7, 28	3				
" dredging		16					
" quarantine wharf		16		60			
Sydney Mines, N.S., public building		7					
T							
Tableau, P.Q		19					
Tadousac, P.Q		21		139			
Tancook, N.S				60			
Tariff, telegraph lines					43		
Technical, books of reference		26					
Telephones					21		
Telegraph lines, generally	15	16			4		
" report					1		
" revenue					20		
" service, staff, &c		26			23, 29		
Temiscouata Lake, P.Q		21		121			
Temporary employees		26					
Tenecape, N.S		16		61			
Terrebonne, P.Q., public building		9					
Teulon, N.W.T., immigration building		33					
Thames River, Ont		23					
Thessalon, Ont		23		163			
Thetford Mines, P.Q., public building		9	11				
Thomson, N.B		18					
Thompson River, B.C		24		174			
Thornbury, Ont		23		163			
Three Rivers, P.Q., harbour		21					
" public building		9, 29					
Ticouabé, P.Q		19		140			
Tidnish, N.S		16					
Tignish, P.E.I		16		76			
Tiverton, N.S		16		61			
Tobique River, N.B		17		98			
" Rocks, N.B		17		98			
Tolsmaville, Ont				164			
Topley's, N.B		18					
Toronto Junction, Ont., public buildings		11	20				
Toronto, Ont., harbour		23		164			
" public buildings		11, 31	19				

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T							
Total expenditure of department		27					
Tracadie, N.B., lazaretto		8, 28					
Tracadie, N.S.		16		61			
Tracadie, N.B., wharf		18		101			
Transportation Commission	10	26					
Trent and Newcastle, slides		24		246		6, 12	
Trenton, Ont., harbour		23		218			
" public building		11, 31					
Trois Lacs, P.Q.		22		140			
" Pistoles, P.Q.		22		141			
Truro, N.S., public buildings		7, 28					
Tynemouth Creek, N.B.		18		102			
Tyrian, ss. cable ship	16	25			20		
U							
Uncollected slide and boom dues						8	
Upper Gagetown, N.B.		18					
" Port Latour N.S.		16		62			
" Salmon River, N.B.		18		103			
V							
Valleyfield, P.Q., dredging		22		215			
" public building		12, 33	23				
Vancouver, B.C. "		8, 27	26				
Vancouver Salt Springs, telegraph		26			40		
Verchères, P.Q.		22		141			
Vernon River, P.E.I.		16		76, 179			
Victoria, B.C., harbour		24		174			
" public buildings		13, 33	23				
Victoria, Cape Beale, telegraph		26			17, 40		
" Andrew, N.W.T., telegraph		26					
Victoria, P.E.I.		16		76			
Victoria Beach, N.S.		16					
Victoria, Ont.		23		165			
Victoria National Museum	10						
Victoriaville, P.Q., public building		9, 29					
Ville Marie, P.Q.		22		215			
W							
Walkerton, Ont., public building		9, 31					
Washabuck, N.S.		16		63			
Washago, Ont.		165					
Water, public buildings		28					
Wedge Point, N.S.		16		63			
Wendover, Ont.		23		165			
West Baccaro, N.S.		16		63			
West Bay, N.S.		16		64			
" Chezzetcook, N.S.		16					
West Farnham, P.Q., public building		9, 29					
Western Head, N.S.		16		64			
West Point, P.E.I.		16		77			
" Pubnico, N.S.				65			
West Wood Harbour, N.S.				65			
Wetaskiwin, N.W.T., public building		33					
Whitehaven, N.S.		16		66			
Whites Cove, N.S.		16		66			
White Mud River, Man.		23		232			
Wiarton, Ont.		23		166			
Wickham, N.B.		18					
Williams Head, B.C., quarantine		13, 33	24				
" wharf		24		175			
Wilmer Channel, B.C.				169			
Wilson's Beach, N.B.		17		103			
Wilson, Jas., gratuity		26					
Windsor, N.S., public building		7, 28					

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W							
Windsor, Ont., public building		11, 31					
" N.S., wharf		12		67			
Wingham, Ont., post office		11	20				
Winnipeg, Man., public buildings		11, 32	20				
Wood Mountain, N.W.T., telegraph		26					
Wolfeville, N.S.		16		67			
Wolseley, N.W.T., court house		12, 33					
Wood Island, P.E.I		16					
Woodstock, N.B., public building		8, 28					
Woodstock, Ont. "		11, 31					
Y							
Yamaska River, P.Q.		22		215			
" lock and dam		22		239		6	
Yarmouth, N.S., dredging		16		68, 178			
" public building		7, 28					
York Bridge, Ont.		25					
Yorkton, N.W.T., public buildings		12, 33					
Yukon River		24					
Yukon, public buildings		13					
" telegraphs	26				41, 49		

PART I

REPORT

OF THE

DEPUTY MINISTER OF PUBLIC WORKS

FOR THE YEAR ENDED JUNE 30

1904

REPORT

OF THE

DEPUTY MINISTER OF PUBLIC WORKS

FOR THE FISCAL YEAR, 1903-04.

Department of Public Works,
Ottawa, January 30, 1905.

The Honourable Charles S. Hyman,
Acting Minister of Public Works of Canada

Sir,—I have the honour to submit to you the report of the Department of Public Works of Canada for the fiscal year ended June 30, 1904.

This report, the general plan of which does not differ materially from that submitted to parliament for the last fiscal year, refers to the works carried on during the 12 months ended June 30, 1904, in the improvement of harbours, rivers, slides and booms, roads and bridges; the construction, maintenance and repairs of the several public buildings, as well as the continuation, completion and maintenance of the telegraph system of the department throughout the Dominion of Canada. It contains also statements of the revenue accrued and collected by this department during the same period, as well as of the expenditure made during the fiscal year.

The information contained in the annexed appendices shows in detail the operations carried on under the guidance of the chief officers of your department. The work performed under their direction, following the increase of the general business of the country and being in direct proportion to the larger amount of money granted for the improvement of the avenues destined to accommodate our ever growing trade and commerce, has required from them, during the year under review, an attention to their work and an exercise of their high qualifications which can at once be discerned by the perusal of their individual reports. It is true that in one of the branches of the service, that of the Chief Engineer, a certain proportion of the work allotted to him has been diverted by legislation to another department, but while the sum of money disbursed for the management of the work in question reached the fairly large average of $500,000 per year (I am now speaking of the ship channel between Montreal and Quebec) still the increase in the general expenditure for the balance of the harbour and river works have more than trebled the sum that used to be spent, under the control of that officer, in connection with this particular work. The gross total of the work under the charge of the Chief Engineer has not, therefore, for this reason, been in any

way materially reduced but has otherwise so very largely increased that it has required from the officer in charge, Mr. Lafleur, increased exertion and has entailed upon him a much greater amount of responsibility.

Such an extension in the scope of the officers' duties has been manifest in all of the branches of your department. The class of buildings, of which the construction has been started during the past year, is of much greater importance and has entailed much more arduous preparation than for years past, while the ever increasing number of new buildings consequent upon the yearly addition to an already numerous list has required from the Chief Architect a greater than usual amount of labour, not only in the line of new buildings but in superintending the maintenance of those already constructed.

In the telegraph system the same enlargement has taken place. The mileage of our telegraph lines is now over 6,000 miles. In cables alone we have to superintend the maintenance of 402 miles.

I am glad to be able again this year to state that the maintenance of our telegraph lines, especially the systems in the Yukon and on the north shore of the St. Lawrence have been attended with very satisfactory results, the whole reflecting great credit upon the General Superintendent.

EXPENDITURE.

The total expenditure during the fiscal year under review, in the various branches of the department, has amounted to the total sum of $7,392,289.62, that sum comprising an amount of $900,000 advanced during that year to the Harbour Commissioners of Montreal for the performance of such works of construction as were authorized by legislation and paid for out of the sums allotted for that purpose by the several Acts of parliament having reference to the establishment of said harbour.

The detail of the general expenditure may be described and divided as follows, viz.:—

Harbour and river works	$3,389,936 02
Dredging and plant	374,181 94
Slides and booms	127,549 37
Bridges and roads	103,759 29
Public buildings	1,890,281 77
Telegraphs	385,693 51
Miscellaneous	220,887 72
	$6,492,289 62

To the above sum should be added that of $900,000 advanced to the Montreal Harbour Commissioners, which makes the total amount expended under the supervision of this department, $7,392,289.62.

During the fiscal year under review the Harbour Commissioners of Montreal completed the erection in their harbour of a large grain elevator of the best and most

modern construction, and I am proud to say that the work in all its details was supervised and carried to a successful issue under one of the departmental engineers, Mr. Arthur St. Laurent, to whose professional ability no better certificate can be given than the satisfactory completion and acceptance of such a difficult piece of work.

I may here call attention to the fact that the above report of the expenditure of the department does not actually give an absolutely exact and correct idea of the work performed by its officers. While it is true that the direct expenditure has only amounted to the sum of $6,492,289.62, it must be borne in mind that the vote placed at the disposal of the department for the same fiscal year has amounted to the sum of $8,681,227.20; the difference between the sum expended and that voted being explained by the fact that either certain works for which amounts were provided by parliament could not be commenced during the year, or that some of the works commenced were not carried on as quickly as expected. Plans, however, had to be prepared for each of those works ; surveys and estimates were made and in a good many cases tenders were called for and contracts awarded. In fact, all the initial work in connection with the unexpected amounts was actually performed and must be taken into consideration when the work of the department during the year is being passed under review.

In the Chief Engineer's branch alone, 238 surveys were made during the year.

A perusal of the short introduction given by the Accountant of the department to his annual statement will show that material increase has taken place in the work of that branch, if only the issue of cheques, in payment for the department's operations, is considered: the number of cheques issued during the past year has averaged about 4,000 per month, a large part of the payments now being made by cheques to the direct order of the parties entitled to receive the department's money. This large amount of work ought to satisfy the public who may read these lines, that if at times some delay occurs in the issue of a payment for their particular account, they are not the only ones whose accounts are being considered and paid, and that in the work devolving on the Accountant's office a certain delay is altogether unavoidable. It is reasonable to expect that the examination, checking, tabulation, &c., of all the accounts, the issue of cheques to cover them and the mailing of same must take in itself a certain time which cannot always be estimated in minutes or fractions of a minute, and that the impatience at what appears to be delay may not always justify a complaint of dilatoriness and negligence on the part of those entrusted with the work.

The requirements of the Auditor General, as regards the physical appearance of the accounts submitted as vouchers, while generally of a very reasonable nature, refer however to such minute details that the local officers in charge of the several works, whose duty it is to certify those vouchers do not always observe all the rules laid down for such certificates. In such cases the accounts have to be returned to the inspecting officers and by the latter to the local inspectors, and when the works are at some distance, and sometimes out of reach of easy communication, the delay, while perhaps unexplainable to the interested party, is, however, one that cannot be avoided.

Considering the large amount of work that has to be performed, I believe I have reason to congratulate the officer in charge of this branch for the satisfactory manner in which his work has been carried on. Of course, in the performance of the same work year after year, means suggest themselves which are brought into action to expedite the work to be performed and in that manner, although we do not expect to fully satisfy the public, a consummation devoutly hoped for but perhaps difficult of attainment, we hope that the percentage of complaints in reference to the delay in the issue of payments is being brought down to a minimum as low as possible.

REVENUE.

The revenue collected by the department this year has amounted to $273,203.23, an amount some $2,000 lower than that collected during the past fiscal year (1902-3) There has been a decrease of some $7,000 in the revenue of slides and booms and of a little over $5,000 in the case of graving docks and locks. There is, however, an increase in the telegraph revenue for the past year of some $15,000.

The revenue branch is carefully looked after by the Collector, Mr. E. T. Smith, who spares neither time nor trouble to bring to the department all the income to which it is entitled out of the several revenue producing branches. The collection of the dues on slides and booms especially entails an incessant labour and great carefulness in the examination of the operations of the several lumbermen in the Trent, St. Maurice and Ottawa districts. The labour of this branch of the service will be further increased next year by the necessary establishment in the River Saguenay of booms for the purpose of accommodating the manufacture of logs of all kinds, especially those which are being produced for the large pulp industry which has been developed at Chicoutimi. New booms are to be placed at the latter point during the present fiscal year (1904-5). and it is expected that a fair revenue will be derived from their use. It is also expected that the ever increasing operations on the River St. Maurice will produce a greater buoyancy in the revenue from that quarter, and taking the departmental operations on all the revenue producing rivers, it is confidently expected that the returns which will be given in the coming report of this department will show a reasonable advance upon those of the present year.

In last year's report I referred to the remarkable advance made in this branch during the past twenty years, when in 1889 the collection only amounted to about $14,000.

I beg to subjoin a detailed statement of the revenue for the year under review, the same being as follows :—

Slides and booms	$ 70,495 62
Graving docks	32,444 56
Locks	140 64
Rents	4,034 50
Telegraphs	147,391 94
Casual revenue	18,695 97
	$273,203 23

HARBOURS AND RIVERS.

The expenditure of the department under this heading including dredging, slides and booms, and roads and bridges, has amounted to nearly $5,000,000, a sum larger than the total expenditure of the department three or four years ago.

All the important harbour improvements executed in the Dominion are under the control of this branch of our service and the total sum expended, fairly large as it may be, hardly gives a sufficient idea of the amount of labour involved in its expenditure.

The engineering branch of the department has, in the designing of the works under its charge, to contend with mostly all the contingencies which it is possible for a fertile imagination to conceive.

In the lower provinces, the abnormal tides, the ravages of the sea worm, and the heavy storms of the spring and fall of each year, have to be taken into earnest consideration when the works have to be planned and executed. In the St. Lawrence river it is true that the ravages of the sea worm are not to be feared, but the heavy tides and, especially, the movement of the ice in the spring and fall of the year, have to be contended with and mastered by means which can best suggest themselves to the ingenuity and science of the hydraulic engineers.

In the lake region, the ever changing aspect of the harbours which have to be accommodated, the discharge by the rivers, which in almost every case empty into the harbours of detritus of all kinds brought down by the spring floods; the sometimes friable nature of the bottom upon which the substructures have to be founded, and the washing away by the contending currents of the surface upon which are deposited the cribs forming the basis of the piers and docks constructed, or in which piles are driven to serve as a foundation for the balance of the work, also present to the engineering staff problems which require all their knowledge and science to master.

These difficulties, coupled with the ever prevailing scarcity of good and available timber for the construction of those works, have compelled the department to consider the advisability of, even at a greater cost, increasing the permanency of the works now constructed, especially in the most important harbours.

In the lower provinces, to contend against the ravages of the sea worm, the use of creosoted timber has been introduced and with very good results. However, as there are no creosoting works in Canada, the timber, after it has been treated, has to be imported from the United States, and this therefore precludes the utilization of native timber and compels us to send to our neighbours across the line, large sums of money which would remain with us if creosoting works were established in our Dominion.

On several occasions the department has provided in its estimates for an amount of money necessary to establish such creosoting works, but up to the present time none have been erected and the practice of buying in the United States has continued.

Not only would the creation of such works be useful for our department, but they might also be utilized in connection with other departments of the service, namely: Railways and Canals and Marine and Fisheries, which to my knowledge, have to import yearly a certain proportion of timber in the same way as is done by our department.

In the upper St. Lawrence and on the lake region, the construction of concrete works has offered to the department the best degree of permanency which at the present time can be attained. The works now going on in the harbour of Quebec, those under contract at Three Rivers, the important improvements at Maisonneuve (Montreal), and the large works now going on at Port Colborne, are being built of concrete masonry.

With the gradual disappearance of timber of large dimensions and the consequent higher price to be paid for it, the cost of cement works is gradually becoming very near that which has to be paid for works constructed of sound durable timber of large size, and the permanency of such works, when the repair to harbour works is taken into consideration, will reduce the apparently higher initial cost.

It was with some degree of hesitation that the department, a few years ago, entered into that style of construction owing to the apparent increased price, but we have to congratulate ourselves at present for having ventured on that course and there is no doubt that all the future important works of the department will be constructed in this manner.

'Wooden structures must of necessity become obsolete; the cost of timber is each year greater, and renewals and repairs are too frequent. Concrete for all structures to be built, and for repairs, would be cheaper in every way, as well as stronger and more lasting, avoiding constant and expensive repairs. Now is the time to start and gain experience in the mode of construction. We have at nearly every harbour the stone, gravel and sand for the taking, and only the cost of cement and labour, with plant, is required to do the work.

'Recently in the Ontario district the department has built a wharf at Orillia with foundation of wooden cribs and superstructure of concrete, at a cost of no more than if built entirely of timber, decked over and filled with stone.

'At Sault St. Marie in the extension of the government wharf, the contract called for wooden superstructure, but the contractor offered to build it of concrete for the same amount of cost and his offer was accepted. There is no comparison between the two methods of construction.'*

Another improvement in the mode of construction of those works is being tried at present in the utilization of a system of beams of reinforced concrete manufactured to resemble timber structures and put together in about the same manner, this plan having been invented and patented by the late J. W. Fraser, a talented young engineer of the department, who, unfortunately, lost his life in a drowning accident which occurred at Rivière du Loup, below Quebec, during the past summer. Mr. Fraser had been connected with the department for a good many years, in fact, had entered it quite young and had grown with it. He was fond of research and study, and utilized his spare moments to inquire into the adaptability of cement and concrete in the construction of works under the charge of the department. Out of his study of that question he evolved the principle of the construction of concrete cribs, which was tried for the first time on the works at Depot Harbour and which, has proved an absolute success.

* Extract from a report by H. A. Gray.

It is to be deplored that he did not live long enough to see the success of his discovery and to have the opportunity of making such improvements as the use of his invention would surely have suggested to his knowledge and activity.

The principal works in connection with harbours, which have been under the control of the department, during the year under review, have been: in the province of Nova Scotia, those of Cow Bay and Victoria Beach; in the province of Prince Edward Island, those at Summerside; in New Brunswick, Cape Tormentine, Caraquet and Richibucto works; in the province of Quebec, those at Father Point, Quebec, Montreal, Sorel and Three Rivers; in the province of Ontario, those at Collingwood, Depot Harbour, Midland, Burlington channel, Owen Sound, Port Burwell, Port Colborne, Toronto, Kaministiquia River, Fort William and Port Arthur; in British Columbia, those on the Fraser River and Victoria Harbour.

Several new harbour works were constructed in the various provinces, the detail of which will be found in the chief engineer's report.

The works at Montreal (Maisonneuve) are nearing completion and it is expected that they will be finished by the end of the present season. A full description of the same was given in former reports and the work done during the past fiscal year has been a continuation of what was described. The works at Quebec were commenced under a contract passed on May 8, 1903; they consist of timber cribwork as a foundation for a concrete superstructure which will stand six feet above high water spring tides. When the work is fully completed it will be 984 feet long and will afford much needed accommodation for ocean shipping. The works at Three Rivers are also of a permanent kind, consisting of a concrete superstructure built on a timber and stone foundation. This work has not been going on as rapidly as expected, but it is to be hoped that good progress will be made during the coming year. The harbour of Three Rivers is increasing its trade in a very rapid manner and from information obtained, the harbour can accommodate, if the necessary wharfing were supplied, many thousand tons of traffic in addition to that which is now served.

In the province of Ontario the works at Port Colborne are being pushed with energy with a view to protecting the harbour area which is being formed at the entrance of the Welland canal. The structures which are being constructed there have been built with a view to permanency, concrete being largely utilized in their erection.

A perusal of the report of the chief engineer will show the progress of the works at the various other important points on the lakes.

At St. Andrews rapids, in the province of Manitoba, new conditions have occurred which have rendered necessary the suspension of the contract which had been entered into for the construction of a lock and dam, among them a proposal by the Canadian Pacific Railway to utilize the works to be constructed there for the purpose of combining therewith a railway bridge. New plans will be prepared with a view of amending the work in order to make it agree with the new conditions arising at that place.

The works in the province of British Columbia, under the control of Engineer Keefer, have been continued with activity during the year. At various points on the

Columbia river, as well as on the Fraser river and in the harbours of Victoria and Vancouver, works of improvement which were commenced some two years ago will be carried on in the same satisfactory manner during the next fiscal year.

In brief, great activity has been shown by the department in providing throughout the country, from the Atlantic to the Pacific, those improvements to navigation which the increased commerce, the development of trade in the several parts of the country and the opening up of the west by the continually increasing stream of immigrants, have rendered absolutely necessary.

In this connection I may note here the important work performed by the Royal Commission on Transportation, which has already covered the ground in the eastern provinces and Ontario, and which will proceed to investigate the question of transportation in connection with Manitoba, the North-west Territories and British Columbia. I am sorry to record here the death of the chairman of that commission, Mr. John Bertram, which occurred on November 28 last. In Mr. John Bertram, the commission has lost a very valuable member who, as chairman, had been conducting its work with a great degree of usefulness which promised very valuable information being derived from its labours. His position as chairman has been filled by the appointment of one of his brother commissioners, Mr. Robert Reford, well known in commercial and shipping circles of Montreal, and as member of the commission he has been replaced by Mr. J. H. Ashdown, of Winnipeg.

Although having taken place after the close of the fiscal year under review, I may also note the formation of the Canadian section of the International Commission on Deep Water-ways, which is to act conjointly with the United States nominees to study and reported on questions of navigation in adjoining waters of the Dominion of Canada and the United States of America. The members of the commission chosen are Mr. J. H. Mabee, a legal gentleman from Stratford, Ontario ; Mr. Louis Coste, formerly Chief Engineer of this department, and Mr. W. F. King, Astronomer of the Department of the Interior. The members of this commission representing Canada will be called upon to perform valuable work and the nominees selected to represent the Canadian Government are a guarantee that the interests of Canada will be well looked after.

I may also refer to the initial steps which have been taken by the department in connection with the surveys now being proceeded with as a preparation for the compiling of plans and estimates for the construction of the Georgian Bay Canal. This work which is under the control of the Chief Engineer and more especially under the guidance of Mr. Arthur St. Laurent, as engineer in charge of the whole work, was commenced during the course of last summer and at the present moment ten surveying parties are distributed over the area extending from Georgian Bay to the harbour of Montreal. It is expected that the field work will be completed by the end of the present calendar year.

'The proposed navigation route extends from the mouth of the French river down to Montreal, a distance of about 425 miles.

'It follows the French river and Lake Nipissing, passes, at the height of land, through Trout, Turtle and Talon lakes, follows the Mattawan river to its junction

with the Ottawa, thence down the Ottawa as far as Montreal, leaving the bed of the river occasionally to evade difficult points.

'Sixty-two miles of this route having been carefully surveyed in 1901, there remained 368 miles to be covered by the new survey.

'It was decided, from the beginning, that the information gathered to study the feasibility of the route, to prepare plans and to make a close estimate of cost of the whole route, should be entirely original and that the old plans from old partial surveys should be used only as preliminary information and for general guidance.

'This will involve actual detailed surveys, on a larger scale perhaps than anticipated, and it will make the survey relatively expensive, but for a project of that magnitude and importance, it will prove much more satisfactory, in the end, to collect actual and complete data from the present field operations.

'The immediate object of the survey is, that when the notes are reduced and plotted, a location may be projected on the plans, for a ship canal of no less than 22 feet in depth, a profile drawn and a correct estimate made of the kind and amount of all material found necessary to be excavated, the kind, character of foundation and dimensions of all walls, locks, dams and other structures, also the estimating of all extra right of way required for the canal proper, where it leaves the bed of the rivers and for spoil banks and overflowed areas.'*

The despatching of so many engineering parties, at the same time as the surveying work for the Transcontinental Railway was being commenced, has given employment to a large number of Canadian engineers. It has been found, on the formation of parties, that the engineering profession in Canada was fully equal to the demand made upon it for the professional equipment which is required for the explorations and studies necessitated by the extensive surveys for those two great works. All the engineering staff has been supplied by Canadian intelligence and professional training, and there is no doubt that the profession in Canada is fully able to render a good account of itself in the performance of the arduous duties connected with the examinations now under way.

During the past fiscal year and under an appropriation granted by parliament two sessions ago, an exploratory and instrumental survey and examination of the Ottawa river was undertaken commencing at or near the foot of Lake Temiscamingue and thence to the source of the river including its principal tributaries and feeders.

Many valuable data have been obtained by the survey parties in spite of the unfavourable weather during the time they were in the field from July to November. The work of plotting the data obtained and preparing the necessary plans is now being proceeded with and it is hoped that the results will be in the possession of the department within a short time.

The work has been throughout under the direction of Mr. G. P. Brophy, the Superintending Engineer of the Ottawa river works.

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* Extract from a report by Mr. A. St. Laurent.

DREDGING.

As was stated in the introduction to my report of last year, a very important part of the work performed by this branch of the department under the control of the Chief Engineer has been that covered by the dredging operations throughout Canada.

The fleet at the disposal of the department has been somewhat reduced by the transfer to the Department of Marine of the vessels engaged in the improvement of the channel between Montreal and Quebec, the seven dredges engaged on that work being no longer under our control. This work, however, the magnitude of which must not be underestimated, only comprises a small proportion of the dredging operations under our charge, and there is still a large fleet attending to the improvement of the harbours and rivers of Canada.

The fleet engaged in the Maritime Provinces will be augmented during the course of the present year by the placing in commission of the new steel dredge the *W. S. Fielding*. This vessel, I think, is the largest of the kind which will be afloat on American waters and it is hoped that its output will be in due proportion to its size, its mode of construction and the expenditure connected with its building and final equipment. Another hydraulic dredge, of smaller proportions but still very powerful, is being now constructed for the Maritime Provinces in the workshops of the Polsons Iron Works in Toronto. She is being built upon the lines adopted for the *King Edward*, operating in British Columbia waters, but several improvements of great value have been added in her construction, and when completed she will be a powerful addition to our maritime fleet.

A new dredge will also be completed for work in Prince Edward Island waters. This one will be a dipper dredge but of modern design and construction.

Plans are now being prepared with a view of calling for tenders for an elevator dredge for the provinces of Ontario and Quebec, with the immediate object of proceeding with the work of improvement in the upper reaches of the River Saguenay at Chicoutimi, where a pressing demand is made for greater depth of water by the more than extraordinary development of the lumber industry, more especially in connection with the manufacture of pulp at the town of Chicoutimi. A large stone lifter will also be provided for.

The powerful dredge *International*, purchased by the department in 1903, has been at work during the past season in the harbour of Quebec.

The dredging fleet on the lakes, which was a year or so ago increased by the addition of a new dredge, *Sir Richard*, has been maintained to its full capacity during the past year, while improvements have also been made to the plant operating on Lakes Winnipeg and Manitoba.

The fleet in British Columbia, to which a valuable addition has been made by the construction two years ago of the hydraulic dredge *King Edward*, is being overhauled, the old snag boat *Samson* being replaced by a new one of an improved type. It is also the intention to provide another dredge to operate in British Columbia waters in the place of the old *Mud Lark*, which has nearly outlived its usefulness.

With the improvements under way and those still contemplated, the department will in a year or so be, I hope, in a position to be abreast of all the dredging work which will be necessary in the Dominion, and the work now being performed is a useful corollary to that which has been undertaken during the past eight years for the general improvement of the dredging plant rendered necessary by the urgent and numerous calls made in all the provinces.

The report of the Chief Engineer contains the usual details of the operations of the dredges throughout Canada, the output of each vessel, the average price per yard for their operation and the names of the various places where each dredge was at work. The statements attached to the Chief Engineer's report have been prepared with the usual care by the officers connected with that branch of the service and give a complete and comprehensive review of the work performed.

The dredging service is being looked after, under the general directions of the Chief Engineer, by the General Superintendent of dredging, Mr. James Howden, ably assisted by Mr. E. B. Godwin. This branch, the control of which comprises now the full service in the whole of the Dominion, will be looked after energetically by the officer in charge, who has had long and varied experience both under this department since 1889, and under the Harbour Commissioners of Montreal for many years before that period, when the fleet operating on the St. Lawrence was about the only one performing such work in Canada and when the dredging operations for the improvement of harbours and rivers were still in their infancy.

SHIP CHANNEL.

The report of the operations on the deepening of the ship channel between Montreal and Quebec is the last one which will find a place in the report of this department as the review of the operations for the fiscal year 1904-5 will be recorded in the report of the Department of Marine. It is only fitting that when bidding adieu to such an important part of the work supervised by us during the past fifteen years, I should render a deserved testimony to the ability and care with which it was performed while under our control. The plans which are now followed are those which were elaborated by the engineers in charge of that service during the above named period, and the success which has marked their performance is of itself the best evidence of the ability of those who were in charge of the work. The channel from Montreal to the head of Lake St. Peter is now, almost everywhere, of the standard depth of 30 feet and the width has been enlarged from 300 feet, at which it was originally placed, to 450 feet and widened in curves to 700 feet. The review of the operations on the channel this year is made by Mr. F. W. Cowie, who has been transferred to the Department of Marine to continue there the clever and useful work which he has performed for so many years in our own department. It is with some degree of sorrow that we have had to part with the useful officers employed here and at Sorel in connection with the ship channel, and it is only fair that this public testimony should be given of their value by one who has been associated with them and with this department for a period of over thirty years.

Mr. Cowie's report gives a full and comprehensive history of the work performed with the usual tables showing the work of each dredge, the points where each of them was stationed, and the average cost of the work of each vessel.

PUBLIC BUILDINGS.

As I have stated at the beginning of this report, the amount expended on public buildings during the year under review comes to a total sum of nearly $2,000,000, the expenditure being spread over nearly 300 buildings and having been made not only for new constructions, but for the maintenance of those already constructed, their repair, heating, ligfating, &c.

Preparations for two new and important buildings were made during the year under review and tenders have been called for the same, they being the Victoria National Museum and the mint—both at Ottawa. Plans have also been prepared and tenders received for the construction of a new post office in the city of Winnipeg, and designs are also on the way for improved postal facilities in the cities of Montreal and Toronto, where the pneumatic system is going to be tried with all hopes of a successful result, and where additional postal stations are to be established in order to relieve the pressure upon the main post office buildings in those cities.

A large amount of work has also been performed in the Chief Architect's office in connection of the construction of armouries, drill sheds and the providing of new buildings in several of the towns of the Dominion.

During the year 1903-4, the following buildings were commenced or were in course of construction, viz.:

Nova Scotia—

Halifax custom house.
Sydney public building (addition).

New Brunswick—

Richibucto public building (completed).

Quebec—

Actonvale public building.
St. Hyacinthe inland revenue building.
Thetford Mines public building.
Valleyfield public building.

Ontario—

Alexandria public building.
Bowmanville public building.
Brantford drill hall.
Cobourg armoury.
Ottawa post office (reconstructed).
St. Catharines drill hall.
Toronto Junction post office.
Wingham public building.

North-west Territories—

Red Deer court-house.
Regina immigration building.

British Columbia—

Nanaimo public building.
Rossland drill shed.

The cost of heating the public buildings in the Dominion has amounted during the year under review to $88,031.41, and for lighting purposes to $75,017.52.

The buildings, as the report will show have been kept in good state of repair in so far as the grants given by parliament would allow, the repairs being executed under the direction of the officers of the Chief Architect's staff whose efficiency is highly proved by the large amount of work which has been turned out by that branch of the department.

TELEGRAPHS.

The total number of miles of telegraphs under the control of the department is 6,614¼ miles, comprising 327 offices which have transmitted during the year under review a total of 102,100 messages. The Yukon system has continued in good operation during the course of the past fiscal year and the receipts, although not coming up to the expenditure for maintenance, have compared favourably with those of the preceding year. Improvements will be made during the course of the next year, which, I hope, will render the line easier of operation and will minimize the chances of interruption during the winter season. With the exception of a few days the communication with Dawson has been practically uninterrupted during the fiscal year.

In the lower St. Lawrence section, a commencement has been made of the construction of a line between Bersimis and Godbout, to take the place of the cables which were laid down between those points in 1882 and which have practically outlived their usefulness. The interruptions complained of during the previous years, will be a thing of the past when the new land line is completed.

It is worthy of note, that, although constructed in the wildest part of the eastern country, the line from Tadousac to Belle Isle has hardly been interrupted during the past year, with the exception of an occasional rupture of the cables between the main land and Anticosti island and the spasmodic operation of the cables between Bersimis and Godbout, to which I have just referred. The Marconi stations at Chateau Bay and Belle Isle utilized as an alternate means of communication between the mainland and Belle Isle, have been in satisfactory operation during the year, their work being performed easily and communication having been kept up throughout without interruption.

The Quarantine line between Grosse Isle and the city of Quebec has been kept in good order with the exception of frequent interruptions in the cables connecting the Island of Orleans with Grosse Isle. In this connection, and to obviate the recurrence of the inconvenience attending the lack of communications in the spring between the Quarantine station and Quebec, I would recommend Marconi stations, one at Grosse

Isle and one at some point on the Island of Orleans which can be established at very reasonable cost and may be operated without any difficulty when the cable is out of repair. Even the placing of another cable from Grosse Isle to the south shore would not entirely remedy the interruptions complained of. Cables, especially during the winter seasons when the ice is travelling in large quantities and with great rapidity on the River St. Lawrence, are apt to be easily interfered with and their repair cannot be attended to until after the opening of navigation in the spring. During the early part of the season communication has therefore, per force, to be interrupted, and I fully believe that the establishment of Marconi stations would obviate this trouble which is of yearly recurrence.

The SS. *Tyrian*, which attends to our cable service in the gulf, the Bay of Fundy and in the St. Lawrence, has been doing valuable work during the year under its able commander, Capt. O'Leary, Pilot McConnell and its valuable officers. While she was not engaged in her own cable work, she has been of great and valuable service otherwise in attending to the repair of the cables of the Direct Cable Company, the work performed by her in this connection having called forth the highest praise from the management of that cable company.

CEMENTS, &C.

Attached to appendix No. 4 will be found a very interesting memorandum from Mr. George E. Perley, Engineer in charge of the cement testing laboratory.

This section of the Chief Engineer's work is becoming very important by reason of the gradual advance of the department in the construction of permanent concrete works. The work in the cement laboratory is being done in a very satisfactory manner and its execution and supervision through Mr. Perley leaves nothing to be desired.

Contractors and other interested parties will appreciate the tables of tests, published in this volume ; these are made, not only at the request of the officers of this, but of other departments, and are eminently satisfactory.

CONTRACTS.

Appendix No. 7 contains the usual list of contracts, deeds and leases which have been prepared and registered in the office of the painstaking and efficient Law Clerk, Mr. J. A. Chassé.

CONCLUSION.

Before concluding this report I beg to offer the expression of my utmost satisfaction to all employees of the department who have assisted in carrying on so successfully the very important works entrusted to them and to myself during the year under review, and I must say that they all deserve the greatest praise for the manner in which they have acquitted themselves of their duties.

I have the honour to be, sir,
Your obedient servant,

A. GOBEIL,
Deputy Minister.

PART II

REPORT OF THE CHIEF ACCOUNTANT

FOR THE

FISCAL YEAR ENDED JUNE 30

1904.

Department of Public Works, Canada,
Accountant's Office,
Ottawa, Dec. 10, 1904.

A. Gobeil, Esq.,
Deputy Minister,
Department of Public Works,
Ottawa.

Sir,—In presenting the annual report on the expenditures made by this department, during the fiscal year ended June 30, 1904, it may not be amiss to make a brief reference to the changes which have taken place during this and the several preceding years, in both the nature and dimensions of the work of the Accountant's branch.

Of the works carried out under the supervision of this department, although most of the larger ones are performed under contract, yet these are few in number compared with the multitude of minor works both of construction and repair, which are executed by day labour under the direct oversight of officers of the department, the result being that a considerable proportion of the expenditure of the department, and by far the larger part of the work of this branch, has always been devoted to the direct payment of wages for labour and cost of materials, bought at first hand from the producer, for use in such works. The immemorial mode of settling such claims has been by sending a paymaster with cash, to visit each locality monthly. There are many objections inseparable from this method, which it is not necessary to detail at present. Suffice it to say that the expansion of late years, in the work of the department, has been so great that even after doubling the staff of paymasters it was found impossible to keep abreast of the work of payment.

Happily with the growing business prosperity of the country, there has also been a large increase in banking facilities in all parts, as is shown by the following figures :

Number of banks and branches in Canada, Jan. 1,				1896....	530
"	"	"	"	1900.....	675
"	"	"	"	1904.....	1059

In many districts, where a few years ago it was utterly impossible to negotiate cheques, and where in fact the meaning of such instruments was hardly understood by the bulk of the population, they now pass readily from hand to hand as the equivalent of cash, and cheques issued by the Dominion government, being payable at par at all banks, are frequently sought after as a convenient means of making remittances.

It was accordingly decided in September, 1900, to adopt, whenever possible, the plan of issuing a separate cheque in favour of each creditor of the department, whether for labour or supplies and whether for a large or a small amount. Such cheques are transmitted by registered letter to the post office address of the payee, or in the case of a paylist, to the foreman for distribution. In most cases no receipt is required, the department trusting for acquittance to the endorsation upon the cheque when paid and returned through the bank. This office is thus enabled to file away its vouchers immediately upon the issue of the cheques, in place of waiting for the return of receipts, as was necessary under the former system—receipts which not infrequently failed entirely to reach the department.

The following statement, showing the number of cheques issued, together with the total expenditure of the department, for the fiscal year just closed as compared with the year 1899 1900 (the last complete year under the former system), will serve to convey some idea of the increase, during the interval, in the annual volume of work performed by the staff of this office.

YEAR ENDED JUNE 30, 1900.

	Number of cheques issued.	Amount.
		$ cts.
Direct payments by departmental cheque—		
Issued by head office, Ottawa	18,035	2,422,755 04
" Agencies of the dept	3,762	364,894 76
Total departmental cheques	21,797	2,787,649 80
	Number of applications.	
Payments by Receiver General's cheque for contract work, &c., audited before payment, upon applications issued by this office	365	775,376 54
Total expenditure for year		$3,563,026 34

YEAR ENDED JUNE 30, 1904.	Number of cheques issued.	Amount.
Direct payments by departmental cheque—		
Issued by head office, Ottawa	38,009	3,748,069 84
" Agencies of the dept	7,475	556,306 82
Total departmental cheques	45,484	4,304,376 66
	Number of applications.	
Payments by Receiver General's cheque &c., &c. (as above).	652	2,187,896 86
Total expenditure for year		$6,492,273 52

There are still a number of districts in which cheques do not readily pass current, and for work in these regions the system of paying through a paymaster still remains in vogue, but their area is constantly decreasing, and doubtless, within a few years, almost, if not all, the payments of the department will be made by direct cheque.

The adoption of this plan has considerably facilitated prompt payment on those works to which it has been applied, but during the past and current years, the increase in the number and magnitude of the works carried on by the department has been such that this branch finds great difficulty in coping with the claims daily referred to it for immediate payment. This state of things causes much inconvenience to the creditors of the department. In my opinion, there is but one remedy, an increase in the staff by the addition of several competent clerks.

Subjoined are the usual tables showing the various sums expended during the fiscal year 1903-04, upon each of the works under control of this department, viz. :—

Statement A, giving for each work the amounts expended for construction and repairs severally, and for each province the total cost of staff and maintenance of public buildings.

Statement B, subsidiary to the above and giving separately for each building the cost of rent, salaries, heating, &c.

Statement C, showing amounts advanced by government for the construction of certain works of a semi public character, under statutory authority and after inspection by officers of this department.

I have the honour to be, sir,
Your obedient servant,

A. G. KINGSTON,
Accountant.

STATEMENTS OF EXPENDITURE

DURING

FISCAL YEAR ENDED JUNE 30, 1904

STATEMENT A.—Showing the Amounts expended by the Department of Public Works of Canada during the fiscal year ending June 30, 1904.

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS.	$ cts.	$ cts.	$ cts.	$ cts.
Nova Scotia.				
Amherst, post office, &c.		2,692 92		2,692 92
Annapolis, post office, &c		135 08		135 08
Antigonish, post office, &c		89 24		89 24
Arichat, post office, &c		321 04		321 04
Baddeck, armoury, &c	378 00			378 00
Baddeck, post office, &c		26 09		26 09
Bridgewater, post office, &c		376 13		376 13
Dartmouth, post office, &c		18 95		18 95
Digby, post office, &c	1,677 02	59 81		1,736 83
Guysboro', post office, &c		1,515 59		1,515 59
Halifax Asst. Receiver General's office		43 50		43 50
" custom house (New)	55,426 81			55,426 81
" Dominion Building		1,375 40		1,375 40
" examining warehouse		68 72		68 72
" immigrant shed	2,340 59	473 48		2,814 07
" Lawlor's Island quar. station	5,657 51			5,657 51
Kentville, post office, &c		32 85		32 85
Liverpool, post office, &c.		25 40		25 40
Lunenburg, post office, &c.		370 62		370 62
Middleton armoury	2,000 76			2,000 76
Nappan experimental farm	465 20	152 60		617 80
New Glasgow post office		14 50		14 50
North Sydney, post office	81 51	56 64		138 15
Pictou custom house		25 72		25 72
" post office	711 23	107 33		818 56
Point Edward (Sydney) quarantine station		68 70		68 70
Springhill post office, &c		2,792 11		2,792 11
Sydney, post office, &c	4,996 03	186 19		5,182 22
Sydney Mines post office, &c	4,590 86			4,590 86
Truro, post office, &c		83 87		83 87
Windsor, post office		16 45		16 45
Yarmouth, post office, &c		187 68		187 68
Heating, lighting, water, &c., for all buildings in Nova Scotia			30,198 20	30,198 20
Totals, Nova Scotia	78,325 52	11,316 61	30,198 20	119,840 35
Prince Edward Island.				
Charlottetown, Dominion building	12,040 00	237 38		12,277 38
Montague, post office		40 39		40 39
Summerside, post office		120 49		120 49
Heating, lighting, water, &c., for all buildings in Prince Edward Island			6,485 83	6,485 83
Totals, Prince Edward Island	12,040 00	398 26	6,485 83	18,924 09
New Brunswick.				
Bathurst, post office, &c.		294 08		294 08
Campbellton, post office, &c	4,078 74			4,078 74
Carleton, (St. John) post office		67 65		67 65
Carried forward	4,078 74	361 73		4,440 47

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*				
New Brunswick—Con.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	4,078 74	361 73		4,440 47
Chatham, post office, &c		77 10		77 10
" quarantine station		43 74		43 74
Dalhousie, post office, &c		102 44		102 44
Fredericton, post office, &c		189 52		189 52
" military building	4,898 30			4,898 30
Marysville, post office		277 17		277 17
Moncton, post office	841 93	229 62		1,071 55
Newcastle, post office	799 96	10 98		810 94
North Head (Grand Manan), post office		155 15		155 15
Partridge Island quarantine station	2,827 04	12 45		2,839 49
Portland (St. John) post office		6 00		6 00
Richibucto, post office	10,042 49			10,002 49
St. John, custom house		1,821 55		1,821 55
" immigration building		1,713 78		1,713 78
" post office		982 58		982 58
" savings bank		108 20		108 20
St. Stephen's, post office, &c		20 95		20 95
Sussex, armoury	3,616 56			3,616 56
" post office, &c		1,178 14		1,178 14
Tracadie lazaretto	320 86			320 86
Woodstock, armoury	6,106 90			6,106 90
" post office, &c	2,821 77	26 74		2,848 51
Heating, lighting, water, &c., for all buildings in New Brunswick			25,834 29	25,834 29
Totals, New Brunswick	36,033 69	7,638 70	25,834 29	69,506 68
Maritime Provinces.				
Generally			379 61	379 61
Quebec.				
Acton Vale, post office	2,245 36			2,245 36
Aylmer, post office		397 35		397 35
Berthierville, post office		69 25		69 25
Buckingham, public building		48 66		48 66
Coaticook, public building		5 55		5 55
Drummondville public building		142 32		142 32
Dundee, custom house		35 00		35 00
Granby, public building		375 92		375 92
Grosse Isle, quarantine station	11,994 76	221 56		12,216 32
Fraserville, public building		105 34		105 34
Hochelaga, post office		284 21		284 21
Hull, post office		224 25		224 25
Joliette, post office		609 11		609 11
Lachine, post office		59 02		59 02
Laprairie, post office		79 01		79 01
L'Assomption, post office	9,975 10			9,975 10
Lévis, cattle quarantine		1,390 18		1,390 18
Lévis, immigrant building		50 00		50 00
Lévis, post office	157 30			157 30
Longueuil, post office	2,838 05			2,838 05
Montmagny, post office	205 08	16 24		221 32
Montreal, custom house		7,750 38		7,750 38
" examining warehouse	16,623 00	18,972 94		35,595 94
" immigration office		133 00		133 00
" inland revenue office		735 53		735 53
" post office	13,046 76	4,868 34		17,915 10
" " power for elevators			3,000 08	3,000 08
" new postal station (St. Catherine Street)		3,168 55		3,168 55
Quebec, citadel buildings		2,225 57		2,225 57
Carried forward	57,085 41	41,967 28	7,000 08	102,052 77

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	57,085 41	41,967 28	3,000 08	102,052 77
Quebec—Concluded.				
Quebec, clerk of works office, P. O		64 20		64 20
" culler's office		2 24		2 24
" custom house		662 99		662 99
" engineer's office		5 93		5 93
" examining warehouse		1,561 94		1,561 94
" King's Wharf building (Marine Dept.)		889 50		889 50
" immigration building (Louise Embankment)		1,862 48		1,862 48
" immigation office		37 00		37 00
" " hospital for trachoma	12,000 18			12,000 18
" observatory		22 35		22 35
" post office		3,648 31		3,648 31
" power for elevator			200 00	200 00
" military buildings:				
artillery workshops	2,967 67			2,967 67
iron foundry	1,051 19			1,051 19
Quebec, St. Roch post office		35 59		35 59
Peribonka, immigrant shed		16 53		16 53
Richmond, public building		401 67		401 67
Rimouski "		119 08		119 08
Roberval, immigration shed		52 07		52 07
Sherbrooke, drill hall	4,519 70			4,519 70
" post office, &c.		292 41		292 41
Sorel, post office, &c		979 35		979 35
St. Henri, post office		217 73		217 73
St. Hyacinthe, drill hall	7,533 40			7,533 40
" public building	11,978 38	423 67		12,402 05
St. Jérôme "		127 69		127 69
St. John's "	38 40	6 00		44 40
St. Louis du Mile End, post office	5,487 43			5,487 43
Terrebonne, post office, &c	1,584 95			1,584 95
Thetford Mines, post office, &c	7,530 91	287 32		7,530 91
Three Rivers custom house	4,472 11	1,407 31		4,759 73
" post office				1,407 31
Valleyfield post office, &c	14,951 44	13 55		14,964 99
Victoriaville " "		363 69		363 69
West Farnham post office		74 73		74 73
Quebec generally			546 34	546 34
Heating, lighting, water, &c., for all buildings in Quebec			85,725 20	85,725 20
Totals, Quebec	131,201 47	55,542 61	89,471 62	276,215 70
Ontario.				
Alexandria post office, &c	8,710 97			8,710 97
Almonte post office, &c	968 50	16 50		985 00
Amherstburg post office		224 43		224 43
Arnprior " "	800 00	56 79		856 79
Barrie " "		155 64		155 64
Belleville " "		551 95		551 95
Berlin " "	9,073 30	3 80		9,077 10
Bowmanville " "	9,984 04			9,984 04
Brampton " "		518 55		518 55
Brantford drill hall		4,487 28		4,487 28
" post office, &c		217 75		217 75
Bridelburg " "	827 47			827 47
Brockville " "		461 70		461 70
" drill hall	651 55			651 55
Carleton Place post office, &c		117 80		117 80
Carried forward	31,015 83	6,812 19		37,828 02

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	31,015 83	6,812 19		37,828 02
Ontario—Continued.				
Cayuga post office, &c		5 90		5 90
Chatham armoury	40 75			40 75
" post office, &c		1,133 56		1,133 56
Clinton " "	8,778 37	50 25		8,828 62
Cobourg armoury	14,999 57	6 00		15,005 57
Cobourg post office, &c	3,545 80	95 16		3,640 96
Cornwall " "		1,626 45		1,626 45
Deseronto armoury	41 00			41 00
" post office, &c	1,535 07	317 72		1,852 79
Dundas armoury	8,146 75	11 20		8,157 95
" post office, &c		16 00		16 00
Fort William post office, &c	22,334 67			22,334 67
Galt " "		41 57		41 57
Gananoque " "		17 00		17 00
Goderich " "		484 78		484 78
Guelph armoury	5,499 95			5,499 95
" post office, &c	18,937 40	12 74		18,950 14
Hamilton Immigrant shed		5 00		5 00
Hamilton post office	5,804 28	539 64		6,343 92
" " " power for elevators			45 00	45 00
Hawkesbury post office, &c	3,006 40			3,006 40
Ingersoll " "		561 07		561 07
Kingston custom house		2,708 32		2,708 32
" drill hall, &c	789 54			789 54
" exam. warehouse		131 43		131 43
" inland revenue office		46 34		46 34
" military college	5,020 20			5,020 20
" post office		739 05		739 05
Lindsay post office, &c		150 40		150 40
London custom house		741 03		741 03
" drill hall and armoury	60,098 97			60,098 97
" post office		2,330 29		2,330 29
Napanee post office, &c		565 81		565 81
Niagara Fall, public building		353 84		353 84
Orillia, post office, &c		34 85		34 85
Oshawa "	3,018 75			3,018 75
Ottawa, astronomical observatory	44,958 52			44,958 52
" departmental buildings (Western)	5,963 21			5,963 21
" experimental farm	5,626 00	3,087 81		8,713 81
" government printing bureau	6,960 85			6,960 85
" major's hill park			5,561 62	5,561 62
" militia stores building	1,522 62			1,522 62
" national art gallery	1,475 00		748 25	2,223 25
" new government coal shed	944 41			944 41
" parliament building	16,851 79			16,851 79
" post office	20,474 67			20,474 67
" Rideau hall	2,972 50	17,171 36		20,143 86
" " grounds $4,944·07; snow $1,230·34; fuel and light $8,000·00; watchman $549·00			14,723 41	14,723 41
" royal mint	9 40			9 40
" Victoria memorial museum	76,041 44			76,041 44
" generally: parliament grounds			8,026 15	8,026 15
" " power for elevators			2,968 75	2,968 75
" " removal of snow			2,770 42	2,770 42
" " repairs and furniture		161,520 83		161,520 83
" " telephone service			7,065 32	7,065 32
Owen Sound, post office, &c		428 40		428 40
Paris "		22 30		22 30
Pembroke, post office		46 80		46 80
Carried forward	376,413 71	201,815 09	41,908 92	620,137 72

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	376,413 71	201,815 09	41,908 92	620,137 72
Ontario Concluded.				
Perth, inland revenue office		47 50		47 50
Peterboro', custom house		103 30		103 30
" post office		185 48		185 48
Petrolea "		22 61		22 61
Picton "	903 06	139 00		1,042 06
Port Arthur, immigrant shed		309 31		309 31
" post office		271 24		271 24
Port Colborne "		76 49		76 49
Port Hope "		1,290 50		1,290 50
Prescott, custom house		102 37		102 37
" post office		140 11		140 11
Rat Portage, public building		243 98		243 98
Sarnia "	13,800 16	3 45		13,803 61
Sault Ste. Marie, post office, &c	24,984 03			24,984 03
Smith's Falls, post office		6 75		6 75
Stratford, public building		120 74		120 74
Strathroy "		3 67		3 67
St. Catharines, drill hall	9,114 50			9,114 50
" post office, &c		177 15		177 15
St. Thomas "		181 52		181 52
Toronto, asst. rec. gen. office	2,100 00	569 49		2,669 49
" custom house	10,055 54	929 27		10,984 81
" drill shed	1,362 69	322 45		1,685 14
" examining warehouse	5,035 56	891 55		5,927 11
" post office	19,130 00	21,264 37		40,394 37
" " power for elevators			479 72	479 72
" postal station "A"		901 43		901 43
" " "B"		185 18		185 18
" " "C"	1,204 06			1,204 06
" Junction, post office	14,998 42			14,998 42
Trenton, post office, &c		9 65		9 65
Walkerton "		8 68		8 68
Windsor "	831 10	580 64		1,411 74
Wingham "	5,250 98			5,250 98
Woodstock "	4,545 58	568 13		5,113 71
" armoury	33 35			33 35
Ontario generally			1,226 03	1,226 03
Heating, lighting, water, &c., for all buildings in Ontario			249,824 59	249,824 59
Totals, Ontario	489,762 71	231,471 10	293,439 26	1,014,673 10
Manitoba.				
Brandon, experimental farm	122 35	263 25		385 60
" post office, &c		563 45		563 45
Dauphin, immigrant shed	245 00	453 90		698 90
East Selkirk, immigration building		2,537 08		2,537 08
Portage La Prairie post office		28 15		28 15
Winnipeg custom house		211 33		211 33
" Dominion lands office		71 00		71 00
" examining warehouse		399 70		399 70
" immigrant shed	489 79	1,347 20		1,836 99
" post office	5,569 25	4,895 69		10,464 94
" " power for elevators			53 60	53 60
" " new building	34,500 00			34,500 00
Manitoba generally			178 22	178 22
Heating, lighting, water, &c., for all buildings in Manitoba			23,356 02	23,356 02
Totals, Manitoba	40,926 39	10,770 75	23,587 84	75,284 98

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
North-west Territories.				
Battleford Dominion lands office		272 00		272 00
Cattle Quarantine, Corrals at various points	1,000 00			1,000 00
Calgary court house, &c	120 00	320 49		440 49
" immigrant building		408 45		408 45
" post office	778 37	265 51		1,043 88
Carnduff, court house	304 98	313 19		618 17
Craik immigrant shed	1,168 90			1,168 90
Davidson immigrant shed	2,025 00			2,025 00
Duck Lake immigrant shed	1,564 17			1,564 17
Edmonton court house		381 75		381 75
" Dom. lands & registry office		280 65		280 65
" jail	15,083 77			15,083 77
" post office		67 48		67 48
Indian Head experimental farm		169 17		169 17
Lethbridge court house & custom house		21 90		21 90
" immigration building		26 25		26 25
" post office		61 00		61 00
Lloydminster immigrant shed	17,746 03			17,746 03
Macleod custom house		159 50		159 50
" court house	9,999 86			9,999 86
Medicine Hat court house		331 15		331 15
Moose Jaw court house	7 00	167 56		174 56
" " post office	33 56			33 56
Moosomin court house		360 04		360 04
Prince Albert court house and post office	22 00	6 00		28 00
" Dom. lands and reg. office		44 20		44 20
Red Deer court house and Dominion lands office	4,454 59			4,454 59
Regina court house		445 31		445 31
" Dominion lands and registry office		1,067 02		1,067 02
" immigrant building	4,498 50			4,498 50
" Lt. Governor's residence		522 55		522 55
" N.W. M. Police barracks	1,570 00			1,570 00
" post office	430 00	566 08		996 08
Rosthern immigrant shed	249 15			249 15
Saltcoats immigrant shed	156 67			156 67
Saskatoon " "	411 68			411 68
Strathcona immigrant shed	593 42			593 42
Wolseley court house		102 15		102 15
Yorkton, court house and jail	6,098 70			6,098 70
North-west Territories generally			9 50	9 50
Heating, lighting, water, &c., for all buildings in N.W.T.			22,472 66	22,472 76
Totals, North-west Territories	68,316 35	6,359 40	22,482 16	97,157 91
British Columbia.				
Agassiz experimental farm	216 44			216 44
Atlin, post office, &c	221 20	67 50		288 70
Kamloops, armoury	2,820 31			2,820 31
" post office, &c	1,703 75	355 89		2,059 64
Kaslo, drill hall	3,418 76			3,418 76
Nanaimo, post office	8,256 70	54 76		8,311 46
Nelson, post office, &c	18,194 17	55 40		18,249 57
" drill hall	950 87			950 87
New Westminster, post office	600 00	262 45		862 45
Revelstoke, drill hall	2,977 33			2,977 33
Rossland, post office, &c	7,978 48	156 70		8,135 18
" armoury	583 57			583 57
Vancouver, drill hall	2,000 00			2,000 00
" post office	1,585 00	2,104 24		3,689 24
" " new building	52,000 00			52,000 00
Carried forward	103,506 58	3,056 94		106,563 52

PART II.—STATEMENT A.—EXPENDITURE—*Continued*

Name of work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Totals.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	103,506 58	3,056 94		106,563 52
British Columbia—Concluded.				
Victoria, drill hall	568 51			568 51
" indian office		771 99		771 99
" post office		1,841 20		1,841 20
" " power for elevators			224 24	224 24
" old post office	2,210 96			2,210 96
William's Head, quarantine station	5,999 13		402 00	6,401 13
British Columbia, generally			1,193 21	1,193 21
Heating, lighting, water, &c., for all buildings in British Columbia			23,823 28	23,823 28
Totals, British Columbia	112,285 18	5,670 13	25,642 73	143,598 04
Yukon District.				
Yukon public buildings			53,675 28	53,675 28
Public buildings generally.				
Salaries of clerks of works and assistants			11,808 44	11,808 44
Printing, stationery, instruments, travelling, &c.			9,217 81	9,217 81
Totals, public buildings generally			21,026 25	21,026 25

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Nova Scotia.					
Abbott's Harbour		625 58			625 58
Abram's River		1,037 89			1,037 89
Amaguadees		3,460 97			3,460 97
Arisaig			2,488 62		2,488 62
Babin's Cove			99 34		99 34
Bailey Brook		2,742 58			2,742 58
Barrington (Skerrow-Channel)	8,738 65				8,738 65
Bayfield			6,789 83		6,789 83
Benoit Cove		799 91			799 91
Big Pond		154 47			154 47
Boularderie Centre		669 98			669 98
Breton Cove		299 23			299 23
Cariboo Island		1,552 07			1,552 07
Chebogue			67 77		67 77
Chegoggin Pier		188 67			188 67
Cheticamp (Eastern Harbour)	6,540 06				6,540 06
Cheticamp Point-wharf		1,223 49			1,223 49
Cheverie breakwater		1,486 39			1,486 39
Church Point			2,995 21		2,995 21
Cow Bay (Port Morien)			21,266 79		21,266 79
Cow Bay Run breakwater		2,063 94			2,063 94
D'Escousse wharf			76		76
Devils Island			252 55		252 55
Digby pier			313 15		313 15
Donalds Head breakwater			2,218 54		2,218 54
Drum Head breakwater		4,620 00			4,620 00
East Bay (repairs to wharf)			263 73		263 73
East Chezzetcook			55 00		55 00
East River, sheet harbour		360 88			360 88
East Berlin breakwater		692 93			692 93
East Jeddore wharf		1,452 78			1,452 78
Economy wharf		2,079 11			2,079 11
Finlay's Point wharf		1,466 22			1,466 22
Five Island wharf			699 97		699 97
Fort Lawrence, landing pier		3,769 25			3,769 25
Friars' Head, boat harbour		578 96			578 96
Fruids Point wharf		1,425 20			1,425 20
Georgeville wharf		2,499 70			2,499 70
Grand Etang harbour		2,279 78			2,279 78
Grand Narrows wharf			2,478 79		2,478 79
Grand River		648 41			648 41
Granville Centre			199 50		199 50
Great Tancook Island			239 58		239 58
Green Cove		6,432 50			6,432 50
Halifax graving dock				10,000 00	10,000 00
Hampton			49 99		49 99
Harbourville			499 71		499 71
Hawk Point inlet		500 04			500 04
Herring Cove (Halifax Co.)		8,159 00			8,159 00
Hortons Landing			70 20		70 20
Iona wharf		684 45			684 45
Indian Brook Flats, Cape Sable Island, wharf		672 90			672 90
Ingonish (North Bay)		542 76			542 76
Island Point, wharf			915 31		915 31
Janvrin's Island		24 20			24 20
Judique, breakwater			398 48		398 48
Kingsport			5,052 61		5,052 61
L'Ardoise, breakwater		104 27			104 27
Larry's River, breakwater		13,627 50			13,627 50
Lingan, beach protection		998 05			998 05
Little Harbour, (or Arnold Point)		2,013 49			2,013 49
Carried forward	15,278 71	71,937 55	47,415 43	10,000 00	144,631 69

PART II.—STATEMENT A.—EXPENDITURE.—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS *Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	15,278 71	71,937 55	47,415 43	10,000 00	144,631 69
Nova Scotia—Con.					
Liverpool	4,945 28				4,945 28
Livingston's Cove			1,800 00		1,800 00
Lockeport, beach protection		225 56			225 56
Lower Washabuck		399 81			399 81
Lower West Pubnico		895 62			895 62
McKay's Point, wharf		191 15			191 15
McNair's Cove		4,768 13			4,768 13
McNutt's Island		489 28			489 28
Mabou Harbour	3,842 86		399 99		4,242 85
Malagawatch		299 99			299 99
Main a Dieu, breakwater		98 45			98 45
Malignant Cove			1,099 07		1,099 07
Margaree Harbour		799 94			799 94
Margaretville			510 72		510 72
Melborne wharf		715 52			715 52
Meteghan (Cove)			2,342 31		2,342 31
Meteghan River			300 99		300 99
Middle River		1,405 35			1,405 35
Minudie wharf			132 25		132 25
Musquodoboit		271 39			271 39
Necum Teuch wharf		4,421 45			4,421 45
Neil's Harbour, breakwater		3,180 00			3,180 00
Newellton			235 21		235 21
New Harbour, breakwater, &c			741 74		741 74
North Gut, St. Anns			85 03		85 03
North River, St. Anns			689 68		689 68
Ogden's Pond		1,449 87			1,449 87
Parker's Cove			1,191 10		1,191 10
Parrsboro'		922 10			922 10
Partridge Island			75 65		75 65
Pembroke, breakwater		4,096 81			4,096 81
Petit de Grat			3,022 81		3,022 81
Pickett's Pier			2,309 65		2,309 65
Pictou	6,924 98				6,924 98
Pictou Island			71 00		71 00
Pinkney's Point			68 26		68 26
Pleasant Bay		71 85			71 85
Poirierville or Lower d'Escousse		4,608 00			4,608 00
Porter's Lake		325 15			325 15
Port au Pique		543 62			543 62
Port Bevis (Big Harbour)		151 86			151 86
Port George breakwater		5,807 95			5,807 95
Port Greville			697 59		697 59
Port Hawkesbury		8,122 50			8,122 50
Port Hood	2,078 58	2,968 85	1,500 09		6,547 52
Port Howe, wharf		1,964 19			1,964 19
Port La Tour, breakwater		1,097 64			1,097 64
Port Maitland		1,503 25			1,503 25
Poulamond			334 97		334 97
Prospect, wharf		453 62			453 62
Ragged Head, boat harbour		200 00			200 00
Red Head			400 04		400 04
Sandy Cove, breakwater		9,232 00			9,232 00
Scott's Bay		1,346 52			1,346 52
Shag Harbour		337 63			337 63
Short Beach		6,799 00			6,799 00
Sight Point			82 06		82 06
South Gut, St. Anns			493 21		493 21
South Ingonish wharf		2,590 00			2,590 00
Spry Bay wharf		508 94			508 94
Carried forward	33,070 41	145,200 54	65,998 85	10,000 00	254,269 80

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	33,070 41	145,260 54	65,998 85	10,000 00	254,269 80
Nova Scotia—Con.					
Swim's Point wharf		1,214 56			1,214 56
Sydney quarantine station			1,566 04		1,566 04
Tenecape breakwater		2,019 48			2,019 48
Tidnish			374 59		374 59
Tiverton, breakwater		15,308 00			15,308 00
Tracadie, breakwater			425 28		425 28
Upper Port Latour		800 00			800 00
Victoria Beach, wharf		120 27			120 27
Washabuck Centre wharf		6,055 00			6,055 00
Wedge Point		1,701 61			1,701 61
West Baccaro		3,500 00			3,500 00
West Bay, Richmond (South Side)wharf		1,747 98			1,747 98
West Chezzetcook breakwater			44 74		44 74
Western Head		3,653 85			3,653 85
West Woods Harbour		686 93			686 93
Whitehaven			500 79		500 79
White's Cove		1,839 66			1,839 66
Windsor Harbour			98 71		98 71
Wolfville Wharf			1,768 89		1,768 89
Yarmouth	1,123 46		325 57		1,449 03
Generally, Nova Scotia				4,151 26	4,151 26
Totals, Nova Scotia	34,193 87	183,847 88	71,103 46	14,151 26	303,296 47
Prince Edward Island.					
Bay Fortune breakwater			149 98		149 98
Bay View			47 61		47 61
Beach Point		334 49			334 49
Belfast (Halliday's wharf)	2,946 54				2,946 54
Campbell's Cove			94 89		94 89
Cascumpec harbour		1,072 75			1,072 75
China Point			125 56		125 56
Cove Head harbour		5,917 40			5,917 40
Crapaud			57 75		57 75
Gaspereau		499 84			499 84
Lambert's Pier	2,946 54	7,824 48	475 79		11,246 81
Lewis Point			1,088 93		1,088 93
Lower Montague (Aitkin's wharf)		2,174 80			2,174 80
Miminigash			350 15		350 15
Morell	1,967 13				1,967 13
New London		781 11	477 15		1,258 26
North Cardigan Pier		2,699 88			2,699 88
Point Prim wharf		396 04			396 04
Richmond Bay		1,335 62			1,335 62
Rustico harbour		23 60			23 60
St. Peter's Bay breakwater		1,557 50			1,557 50
Souris, Knight's Point			9,468 09		9,468 09
Summerside harbour		12,510 53			12,510 53
Sturgeon Pier			59 62		59 62
Tidnish, rebuilding northern breakwater		699 93			699 93
Vernon River	8,871 00		299 26		9,170 26
Victoria Pier			26 94		26 94
Wood Islands		884 50			884 50
West Point wharf			1,438 81		1,438 81
Harbours generally (P.E.I)				2,516 24	2,516 24
Totals, P.E. Island	13,784 67	30,887 99	13,684 74	2,516 24	60,873 64

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
New Brunswick.					
Anderson's Hollow			1,797 22		1,797 22
Bay du Vin, wharf		365 00			365 00
Belliveau, wharf			750 00		750 00
Black Brook (Loggieville)		5,060 96			5,060 96
Buctouche wharf			2,438 93		2,438 93
Burnt Church			321 82		321 82
Campbellton, Ferry wharf		3,100 00			3,100 00
" wharf extension and repairs			4,584 18		4,584 18
Campobello (Wilson's Beach)			8,055 40		8,055 40
Cape Tormentine		10,109 42			10,109 42
Caraquet	6,316 53	11,629 00			17,945 53
Chatham	905 60				905 60
Chockfish, extension of training pier		1,993 80			1,993 80
Clifton (Stonehaven)		2,289 50			2,289 50
Cocagne wharf				250 00	250 00
Dalhousie, harbour improvement		123 72			123 72
Dipper Harbour		493 04			493 04
Edgett Landing			410 00		410 00
Gagetown	1,772 18				1,772 18
Grand Anse		2,515 69			2,515 69
Grand Lake (Jemseg Channel)	4,760 88				4,760 88
" (Newcastle)	1,336 06				1,336 06
Hopewell Cape			4,641 83		4,641 83
" Hill		244 56			244 56
Little Salmon River			634 78		634 78
Lord's Cove—Deer Island		1,050 00			1,050 00
Miscou Harbour—wharf		73 72			73 72
Mispec Harbour		991 68			991 68
Neguac	8,592 33				8,592 33
Newcastle (Miramichi)	1,050 70				1,050 70
North Head Grand Manan b'water whf.		42 67			42 67
Partridge Island			500 00		500 00
Petit Rocher—breakwater		351 65			351 65
Point du Chene 1,705 96					
Less repaid by I.C. Ry. 315 00					
	1,390 96				1,390 96
Point du Chene breakwater			1,746 68		1,746 68
Quaco			450 08		450 08
Red Store (wharf) St. George			150 78		150 78
Richibucto	9,549 12	1,589 67			11,138 79
" River			583 00		583 00
River St. John—Including tributaries—					
Edmonston 4,551 19					
Grand Falls 4,525 58					
" breakwater 1,284 49					
Grand River Madawaska 250 00					
Iroquois 275 76					
Little Tobique 399 00					
" Forks 100 00					
Madawaska 358 62					
Main River 110 65					
Serpentine River 400 00					
Tobique River 548 00					
" Rocks 460 61					
St. Francis River 450 19					
St. John River improvem 256 28					
Mouth of Salmon River to mouth of Crookston River 200 00					
Between Fredericton and Woodstock 137 76					
Generally 886 07					
		15,194 20			15,194 20
Carried forward	35,674 36	57,218 28	27,064 70	250, 00	120,207 34

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	35,674 36	57,218 28	27,064 70	250 00	120,207 34
New Brunswick—Con.					
River St. John, wharfs in tidal wat—					
Belyeas	349 13				
" Cove (Wickham)	231 00				
Burton	180 00				
Cedars	309 00				
Clifton	60 85				
Coles Island	388 50				
Courthouse	240 00				
Brown's Flats	362 14				
Dunbains	546 00				
Flewelling	288 73				
" (Westfield)	240 80				
Gerows	341 25				
Hatfield Point	379 91				
Holderville	436 49				
Humphreys Point	308 18				
Jenkins Cove	426 03				
McGowan (high water)	161 09				
Oak Point	182 70				
Oromocto	208 23				
Parkers	258 75				
" (low water)	284 18				
Sewells	276 50				
Thomsons	76 01				
Topleys	155 65				
Upper Gagetown	482 00				
Wickham	550 02				
		7,813 14			7,813 14
River St. John (wharf at Oromocto)	4,577 67	6,618 25			11,195 92
St. John Harbour (Negro Point b'water)		12,173 43			12,173 43
St. John Harbour—dredging	14,502 94				14,502 94
St. John Harbour, protection work at base of Fort Dufferin			3,499 66		3,499 66
St. Nicholas River			97 00		97 00
Shippegan Harbour			1,097 85		1,097 85
Shippigan, (wharf at Lameque)		1,630 00			1,630 00
Springhill (York Co)	1,586 72				1,586 72
Tracadie			844 66		844 66
Tynemouth Creek			1,001 00		1,001 00
Upper Salmon River (Alma Pier)		3,455 00			3,455 00
Generally				4,151 26	4,151 26
Totals, New Brunswick	56,341 69	88,908 10	33,604 87	4,401 26	183,255 92
Quebec.					
Anse à Beaufils			496 80		496 80
Anse aux Gascons		2,765 50			2,765 50
Anse aux Grip Fonds		1,999 06			1,999 06
Anse St. Jean		3,048 04			3,048 04
Baie St. Paul, repairs to wharf at Cap aux Corbeaux			3,279 66		3,279 66
Baie des Rochers			620 97		620 97
Barachois de Malbaie		225 21			225 21
Beauharnois			1,261 50		1,261 50
Bekeil guide piers	8,012 67				8,012 67
Bergeronnes			25 60		25 60
Berthier (en haut)			494 69		494 69
Berthier (en bas)			447 96		447 96
Bic, pier at Pointe à Coté, &c			1 58		1 58
Bois Brûlé, training pier		1,704 24			1,704 24
Carried forward	8,012 67	9,742 05	6,628 76		24,383 48

PART II.—STATEMENT A—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	8,012 67	9,742 05	6,628 76		24,383 48
Quebec—Con.					
Bonaventure East b'water		5,000 03			5,000 03
Boucherville			10 40		10 40
Cacouna		2,298 35			2,298 35
Caplan, breakwater		5,118 80			5,118 80
Cedars			552 21		552 21
Cap de la Madeline			799 49		799 49
Cap Santé			16 20		16 20
Chambord wharf		1,541 67			1,541 67
Champlain wharf			4,628 07		4,628 07
Chateau Richer		8 00			8 00
Coteau du Lac			914 36		914 36
Chicoutimi wharf			1,045 03		1,045 03
Coteau Landing	1,908 00		190 47		2,098 47
Crane Island, South Side			3,096 07		3,096 07
Cross Point		5,755 00			5,755 00
Deschambault wharf		2,972 00			2,972 00
Desjardins, Alumet Island wharf		113 41			113 41
Doucets Landing	11,800 15				11,800 15
Douglastown		1,048 91			1,048 91
East Templeman wharf		33 92			33 92
English River		2,865 89	9 80		2,875 69
Escoumains		499 38			499 38
Father Point, landing pier		39,162 26			39,162 26
Gatineau River, protection east bank		2,845 15	17 54		2,862 69
Georgeville			78 57		78 57
Graham wharf	11,851 60				11,851 60
Grande Rivière wharf		765 79			765 79
Grands Mechins		242 74			242 74
Grandes Bergeronnes			224 38		224 38
Grande Vallée, pier		19,830 00			19,830 00
Grondines wharf		4,395 60			4,395 60
Hudson wharf		1,230 82			1,230 82
Hull wharf			40 79	28 00	68 79
Iberville			412 84		412 84
Isle aux Coudres		2,042 94			2,042 94
Isle Perrot			437 80		437 80
Isle Verte		800 00			800 00
Kamouraska		3,915 81			3,915 81
Knowltons Landing			176 52		176 52
Lake Megantic			51 13		51 13
Lake St. John wharfs—					
Grand Decharge			182 17		182 17
St. Methode			792 08		792 08
Generally				824 35	824 35
Lake St. John dredging—					
Roberval	3,445 11				3,445 11
Generally				8 66	8 66
Lake Nominingue		2,017 22			2,017 22
Lanoraie			10 61		10 61
L'Assomption	209 00				209 00
Laprairie, ice piers &c		14,951 00			14,951 00
Les Eboulements			394 73		394 73
Lévis graving dock				15,223 50	15,223 50
Le Tableau, Descente des Femmes, wharf on River Saguenay		3,018 33			3,018 33
L'Isle d'Alma, removal of rock		1,501 97			1,501 97
L'Islet			496 17		496 17
Lotbinière		6,971 97			6,971 97
Lower St. Lawrence, removal of rock—					
Anse à Beaufils			100 00		100 00
Carried forward	37,226 53	140,689 01	21,306 19	16,084 51	215,306 24

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	37,226 53	140,689 01	21,306 19	16,084 51	215,306 24
Quebec—Con.					
Lower St. Lawrence—					
Cap Blanc Percé			11 01		11 01
Cape Cove			100 00		100 00
Cap des Rosiers			101 19		101 19
Cape Madeleine			50 00		50 00
Cap Rouge			50 00		50 00
Chlorydormes			267 21		267 21
Grandes Bergeronnes			298 65		298 65
Lake Beaulieu			297 76		297 76
Little Fox River			50 00		50 00
Little Valley			50 00		50 00
Petite anse Chlorydormes			109 26		109 26
Petite Tourelle			100 00		100 00
Percé			289 20		289 20
Percé, Red Head			287 62		287 62
Petite Rivière			125 00		125 00
Rivière Ste. Anne			164 00		164 00
Roches Noires, Petite Rivières			50 00		50 00
St. Anne des Monts			189 90		189 90
Magdalen Islands, breakwaters					
Amherst		4,476 32			4,476 32
Grand Entry		26 00			26 00
Grindstone		9,408 76			9,408 76
House Harbour		112 28			112 28
Pointe à Elie		10,431 50			10,431 50
Magog			1,806 58		1,806 58
Maguasha landing pier		3,998 70			3,998 70
Maria Pier		20,640 65			20,640 65
Matane			2,973 34		2,973 34
Mistook (Delisle) wharf		2,061 04			2,061 04
Montebello	86 25				86 25
Mount Louis wharf		4,999 69			4,999 69
Montmagny wharf			123 53		123 93
Montreal Harbour		209,104 96			209,104 96
New Carlisle			1,300 93		1,300 93
Newport breakwater		63 63			63 63
New Richmond breakwater		2,439 71			2,439 71
Nicolet River	11,723 81				11,723 81
Notre Dame du Portage		119 65			119 65
Paspébiac, landing pier		5,705 82			5,705 82
Percé wharf (North Cove)		1,387 26			1,387 26
Percé South Beach			399 63		399 63
Petites Bergeronnes		611 36			611 36
Petite Cap			100 00		100 00
Philipsburg			15 19		15 19
Pierreville	3,116 55	3,816 91			6,933 46
Pointe aux Esquimaux		5,099 93			5,099 93
Pointe aux Trembles (Portneuf Co.)		1,343 88			1,343 88
Pointe Claire			150 00		150 00
Point Fortune		1,078 93			1,078 93
Pointe St. Pierre, breakwater		9,800 00			9,800 00
Port Daniel		5,441 79			5,441 79
Quebec Harbour, improvements		68,347 33			68,347 33
Rigaud	1,394 50				1,394 50
Repentigny wharf		204 06			204 06
Rimouski wharf		27,236 75			27,236 75
River St. Lawrence ship channel		582,040 92			582,040 92
River aux Renards		1,550 95			1,550 95
River Batiscan	7,440 50				7,440 50
River Ottawa—					
Blanche Shoals 5,246 00					
Calumet 3,283 10					
Cobb Island 480 00					
Grenville 1,575 57					
	10,602 67				10,602 67
Carried forward	71,590 81	1,122,237 79	30,766 59	16,084 51	1,240,679 70

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS.—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	71,590 81	1,122,237 79	30,766 59	16,084 51	1,240,679 70
Quebec—Continued.					
Rivière Chateauguay	2,140 95				2,140 95
Rivière du Lievre, dredging at mouth	880 00				880 00
" " Lock			3,641 66	995 49	4,637 15
" Loup (Fraserville)		3,613 20			3,613 20
" " (en haut)	2,523 00				2,523 00
Rivière Jesus	6,312 00				6,312 00
" Quelle pier			5,846 34		5,846 34
" Richelieu	437 43		1,259 88		1,697 31
" Saguenay	621 89			12 50	634 39
" St. Francis, ice pier, Richmond		10,620 91			10,620 91
" St. Louis		63 45		150 00	213 45
" St. Maurice Channel, between Grandes Piles and La Tuque	7,751 53				7,751 53
Riviere St. Maurice, mouth	13,878 50				13,878 50
Rivière Verte, wharf		3,698 76			3,698 76
Roberval			653 45		653 45
Sacré-Cœur, wharf		951 39			951 39
Sabrevois wharf	721 11	693 14			1,414 25
St. Alexis, Baie des Ha Ha, pier		4,067 41			4,067 41
St. Alphonse de Bagotville			2,465 77		2,465 77
St. André de Kamouraska			3,120 42		3,120 42
Ste. Anne des Monts			199 45		199 45
Ste. Anne de la Pocatière		4,280 70			4,280 70
Ste. Anne de la Pérade			3,000 00		3,000 00
Ste. Anne de Sorel			5,353 54		5,353 54
Ste. Anne du Saguenay, wharf		1,101 80			1,101 80
St. Andrews	2,478 97				2,478 97
St. Denis	253 67				253 67
Ste. Famille, I.O		4,029 63			4,029 63
St. Felicien			302 94		302 94
St. Fidèle wharf		3,704 85			3,704 85
St. Francis River	134 33				134 33
St. Francois, breakwater, south shore, I.O		8,305 96			8,305 96
St. Fulgence		998 37			998 37
St. Gédéon Islands wharf		2,172 04			2,172 04
Ste. Geneviève, piers and spans			2,492 94		2,492 94
St. Godefroi de Nouvelle		2,557 27			2,557 27
St. Irénée, wharf		7,613 06			7,613 06
St. Jean, I.O			1,266 53		1,266 53
St. Jean des Chaillons wharf	1,004 18	44 83			1,049 01
St. Jean Port Joli			1,116 41		1,116 41
St. Jerome (Lake St. John) wharf		2,091 92			2,091 92
St. Johns	1,740 36				1,740 36
St. Laurent, I.O			122 21		122 21
St. Marc, wharf		501 93			501 93
St. Mathias wharf			1 38		1 38
St. Michel de Bellechasse	861 21		4,581 26		5,442 47
St. Nicholas			142 14		142 14
St. Siméon		2,992 20			2,992 20
St. Roch des Aulnaies			316 57		316 57
St. Valentin pier			1,158 15		1,158 15
St. Zotique			509 01		509 01
Seven Island wharf		25,009 06			25,009 06
Shegawake		2,818 02			2,818 02
Sorel, deep water wharf		44,224 75			44,224 75
Sorel ice piers		2,280 59			2,280 59
Tadousac, wharf			471 73		471 73
Temiscouata Lake (Notre Dame du Lac)			1,199 50		1,199 50
Three Rivers harbour		49,179 03			49,179 03
Carried forward	113,329 94	1,309,852 06	69,987 87	17,242 50	1,510,412 37

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	113,329 94	1,309,852 06	69,987 87	17,242 50	1,510,412 37
Quebec—Con.					
Trois Lacs or Flints Landing		731 88			731 88
Trois Pistoles breakwater		5,045 44			5,045 44
Valleyfield	4,032 00				4,032 00
Verchères		5,228 00			5,228 00
Ville-Marie (Lake Temiscamingue)		6,633 55			6,633 55
Yamaska lock and dam			3,698 21	1,244 52	4,942 73
Yamaska River	6,399 42				6,399 42
Generally	5,464 24			7,896 71	13,360 95
Totals, Quebec	129,225 60	1,327,490 93	73,686 08	26,383 73	1,556,786 34
Ontario.					
Amherstburg—dredging	10 92				10 92
Barrie		3,225 13			3,225 13
Barrys Bay (Madawaska River)		14 14			14 14
Bayfield	2,065 33	6,668 58	402 79		9,136 70
Beaverton			50 56		50 56
Blind River, wharf		7,418 42			7,418 42
Bowmanville			1,000 00		1,000 00
Bracebridge wharf		2 90			2 90
Brockville	3,480 00				3,480 00
Bronte		6,139 28			6,139 28
Bruce Mines			85 00		85 00
Burk's Falls		1,780 75			1,780 75
Burlington Channel			55,282 69	3,017 44	58,300 13
Christian Island			400 00		400 00
Cockburn Island			399 74		399 74
Cobourg			4,999 99		4,999 99
Colborne			3,024 97		3,024 97
Collingwood	65,411 65				65,411 65
Cornwall			48 00		48 00
Cumberland		118 31			118 31
Depot Harbour	10,974 70	95,159 41			106,134 11
Gananoque	7,494 25				7,494 25
Georgian Bay, Pte au Baril route		1,352 57			1,352 57
Goderich	1,317 74	17,499 99			18,817 73
Gore's Landing wharf		2,932 05			2,932 05
Grand Bend, breakwater		298 64			298 64
Grand River, Dunnville	10,631 40				10,631 40
Haileybury, Lake Témiscamingue		8,842 18			8,842 18
Hamilton	1,017 22				1,017 22
Hawkesbury	4,004 00		184 86		4,188 86
Hiawatha			1,038 50		1,038 50
Hilton, St. Joseph Island			39 90		39 90
Honora		182 65			182 65
Kincardine	1,946 00		1,142 15		3,088 15
Kingston, harbour	4,233 30				4,233 30
" graving dock		46,096 12		5,806 48	51,902 60
Kingsville			998 96		998 96
Lakes Simcoe and Couchiching	7,834 00	1,976 45			9,810 45
Lancaster			98 83		98 83
Leamington		3,733 65			3,733 65
Little Bear Creek	1,810 00				1,810 00
Little Current		200 75			200 75
L'Original wharf		974 52			974 52
Meaford		315 20	1,989 33		2,304 53
Midland	21,242 65	4,769 51			26,012 16
McCrackens landing			790 72		790 72
McGregor's Creek		4,536 00			4,536 00
Monetville, Lake Nipissing			578 17		578 17
Morpeth			199 81		199 81
Carried forward	143,473 16	214,237 20	72,754 97	8,823 92	439,289 25

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	143,473 16	214,237 20	72,754 97	8,823 92	439,289 25
Ontario—Con.					
Mount Julien			239 77		239 77
Newcastle			7,999 60		7,999 60
New Liskeard, Lake Témiscamingue	4,685 80				4,685 80
North Bay			10 66		10 66
Oakville			6,000 00		6,000 00
Orillia		6,634 67			6,634 67
Oshawa			80 52		80 52
Ottawa, dock at foot of locks			104 77		104 77
Owen Sound	15,984 85				15,984 85
Parry Sound		263 62			263 62
Pelee Island wharf		1,518 00	400 00		1,918 00
Pembroke wharf		341 84			341 84
Penetanguishene	7,696 90				7,696 90
Pickering			500 00		500 00
Point Edward (Sarnia)	21,583 10				21,583 10
Port Arthur	94,777 04		14,002 64		108,779 68
Port Burwell	4,276 88	26,966 27			31,243 15
Port Colborne		143,026 91			143,026 91
Port Elgin	1,100 00		2,830 17		3,930 17
Port Hope	1,534 38		5,000 00		6,534 38
Port Stanley			288 38		288 38
Prescott	4,055 50				4,055 50
River St. Lawrence (dredging at Wolf Island)	8,571 25				8,571 25
Rivière aux Puces			1,584 70		1,584 70
River Kaministiquia	64,921 97				64,921 97
River Otonabee	5,403 34				5,403 34
River Ottawa, Narrows above Pembroke	7,000 00				7,000 00
River Sydenham	3,677 57				3,677 57
River Thames	20 00				20 00
Robbins Landing			143 44		143 44
Rondeau Harbour	6,498 29		11,646 22		18,144 51
Rosedale wharf		985 64			985 64
Sarnia	5,651 40				5,651 40
Sault Ste. Marie		13,669 42			13,669 42
St. Joseph, Lake Huron		4,604 11			4,604 11
Sturgeon Falls		4,123 18			4,123 18
Thessalon		417 27			417 27
Thornbury		1,499 90			1,499 90
Toronto Harbour, eastern entrance	2,106 00	42,574 73			44,680 73
Trenton	1,860 00				1,860 00
Victoria Harbour	6,964 10				6,964 10
Wendover		1,097 48			1,097 48
Wiarton		14 08			14 08
Generally	9,667 02			8,688 95	18,355 97
Totals, Ontario	421,508 55	461,974 32	123,585 84	17,512 87	1,024,581 58
Manitoba.					
Gimli wharf			1,111 83		1,111 83
Gull Harbour wharf		1,306 72			1,306 72
Huausa wharf		1,480 20			1,480 20
Icelandic River wharf		844 04			844 04
Lake Dauphin, lowering	2,224 26				2,224 26
Lake Frances, outlet	3,124 68	2,867 79			5,992 47
Lake Manitoba (outlets)	2,243 59				2,243 59
Red River—Mouth	7,345 15				7,345 15
Selkirk	2,847 89	2,953 23			5,801 12
St. Andrew's Rapids (Red River)		17,380 20			17,380 20
White Mud River	3,469 70				3,469 70
Generally	600 12			2,405 04	3,005 16
Totals, Manitoba	21,855 39	26,832 18	1,111 83	2,405 04	52,204 44

PART II.—STATEMENT A—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
British Columbia.					
Anderson Lake		999 14			999 14
Atlinto River			50 00		50 00
Columbia River, above Revelstoke		5,921 27			5,922 27
" " " Golden		8,492 69			8,492 69
" " below Golden		4,924 87			4,924 87
" " between Upper and Lower Arrow Lakes	11,783 58				11,783 58
Columbia River (bal. dredge machinery)		3,000 00			3,000 00
Duncan River	1,993 15				1,993 15
Esquimalt, graving dock				12,854 55	12,854 55
Fraser River	31,735 25		30,579 67		62,314 92
Hardy Bay, wharf		1,564 20			1,564 20
Kennedy Lake		1,499 95			1,499 95
Northern Thomson River		4,746 10			4,746 10
Quatsino City, wharf		4,991 70			4,991 70
Salmon River		2,630 21			2,630 21
Sidney Harbour		7,739 36			7,739 36
Skeena River		4,949 71			4,949 71
Spallumchin River		1,490 16			1,490 16
Victoria Harbour	31,659 54		34 25		31,693 78
William's Head, quarantine sta. wharf		10,973 05			10,973 05
Generally				1,403 21	1,403 21
Totals, British Columbia	77,171 52	63,922 41	30,663 92	14,257 76	186,015 61
Yukon Territory.					
Lewis and Yukon Rivers		9,569 22			9,569 22
Totals Yukon		9,569 22			9,569 22
Harbour and Rivers Generally.					
General expenses of staff, &c	4,788 77			8,547 73	13,336 50
DREDGES AND DREDGING PLANT.					
Maritime Provinces		126,001 03	(*a*)		126,001 03
Ontario and Quebec		204,390 06	30,796 53		235,186 59
Manitoba			6,724 12		6,724 12
British Columbia		1,270 75	4,999 45		6,270 20
Totals, Dredges and Dredging Plant		331,661 84	42,520 10		374,181 94
SLIDES AND BOOMS.					
Richelieu River—					
Beleil booms				549 55	549 55
St. John's boom			35 50		35 50
Ottawa District—					
Ottawa River			5,409 78	24,399 49	29,809 27
Black River			269 86	24 40	294 26
Cheneaux booms allowance to Improvement Co				1,438 31	1,438 31
Coulonge River			1,076 17		1,076 17
Dumoine River			978 94		978 94
Gatineau River			893 45	1,052 57	1,946 02
Madawaska River			407 01	137 42	544 43
Petewawa River			6,016 65	65 43	6,082 08
St. Maurice District		45,934 53	588 52	30,142 19	76,665 24
Trent and Newcastle District			1,862 53	2,060 29	3,922 82
Collection of Slide and Booms dues				4,206 78	4,206 78
Totals, Slides and Booms		45,934 53	17,538 41	64,076 43	127,549 37

(*a*) Cost of repairs ($13,996 32) apportioned with dredging, see various harbours in Maritime Provinces.

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
ROADS AND BRIDGES.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec and Ontario.				
Des Joachims Bridge, Ottawa River	81 00			81 00
Moisie Post Road, North Shore St. Lawrence	698 51			698 51
Ottawa, Maria St., (Laurier) Bridge	2,349 50			2,349 50
Ottawa City bridges and streets maintained by Govt—				
Cartier Square—permanent sidewalks	741 16			741 16
Chaudière bridges and approaches		2,053 53		2,053 53
St. Patrick St.—printing bureau		60 48		60 48
Sappers and Dufferin bridges and Wellington st.	1,350 00	4,783 43		6,133 43
Lighting all the above			2,949 50	2,949 50
Portage du Fort Bridge, Ottawa River	10,750 72			10,750 72
York Bridge, Grand River			198 34	198 34
North-west Territories.				
Battleford Bridge, Battle River	1,413 23			1,413 23
Edmonton Bridge, Saskatchewan River		1,509 65		1,509 65
Calgary Bridge, Bow River		750 66		750 66
Lethbridge Belly River	43,918 52			43,918 52
" Ferry (temporary)			328 50	328 50
Macleod Bridge, Old Man's River	29,000 00			29,000 00
Generally N. W. T			822 56	822 56
Totals, Roads and Bridges	90,302 64	9,157 75	4,298 90	103,759 29
TELEGRAPH LINES.				
Newfoundland.				
Cape Ray line (subsidy)			250 00	250 00
Nova Scotia.				
Big Bras d'Or to Upper Kempt Head, Boularderie Island	1,486 19			1,486 19
Cheticamp—Meat Cove line			6,972 23	6,972 23
St. Peters to Louisburg, Scatarie and North Sydney	14,042 46			14,042 46
" Canso	957 89			957 86
Prince Edward Island.				
P. E. Island and mainland (subsidy)			1,946 66	1,946 66
New Brunswick.				
	428 28			428 28
Deer Island to Eastport, Me.			1,676 15	1,676 15
Bay of Fundy line			411 92	411 92
Escuminac line				
Quebec.				
Anticosti-Gaspé lines		2,388 41	5,541 68	7,930 09
Belle Isle—Chateau Bay (Marconi system)	3,312 21		188 71	3,500 92
Isle aux Coudres line			150 00	150 00
Island of Orleans and Grosse Isle	937 89		2,157 59	3,095 48
North Shore, east of Bersimis	3,150 70	3,619 87	10,571 26	17,341 83
" west "	609 54		5,680 08	6,289 62
Magdalen Islands lines	3,959 44		3,111 48	7,070 92
Saguenay River lines, east side	4,866 82			4,866 82
" " west side	7,940 79			7,940 79
Generally, Gulf and Mar. Provinces			14,125 68	14,125 68
" expenses ss. 'Tyrian'			23,348 63	23,348 63
Ontario.				
Pelee Island line		2,119 25	182 27	2,301 52
Carried forward	41,692 21	8,127 53	76,314 34	126,134 08

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
TELEGRAPH LINES.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	41,692 21	8,127 53	76,314 34	126,134 08
North-west Territories.				
Edmonton to Athabaska Landing	6,668 44			6,668 44
" Edmonton Indian agency	151 11			151 11
Lloydminster loop line	4,034 25			4,034 25
Victoria, Andrew loop line	527 32			527 32
Wood Mountain to Willow Bunch	3,960 90			3,960 90
Generally N. W. T			19,938 62	19,938 62
British Columbia and Yukon District.				
Alberni-Cape Beale			483 00	483 00
Alberni-Clayoquot			3,888 42	3,888 42
Ashcroft-Dawson	1,039 37		199,226 14	200,265 51
Golden-Windermere			3,622 75	3,622 75
Kamloops-Nicola		752 62	611 70	1,364 32
Nanaimo-Comox			3,725 23	3,725 23
Vancouver-Saltspring	1,006 30		264 62	1,270 92
Victoria-Cape Beale			5,604 53	5,604 53
Generally. B.C			749 07	749 07
Telegraph service, generally			3,305 04	3,305 04
Totals, Telegraphs	59,079 90	8,880 15	317,733 46	385,693 51
MISCELLANEOUS.				
Arbitrations and awards			1,480 12	1,480 12
Cement testing laboratory			1,428 71	1,428 71
Surveys and inspections			50,651 12	50,651 12
Surveys of headwaters of Ottawa River and tributaries			6,760 60	6,760 60
Temporary employees—				
Secretary and accountant's staff			42,435 36	42,435 36
Chief architect's staff			30,501 39	30,501 39
Chief engineer's staff			72,834 16	72,834 16
Supt. tel. service staff			4,225 00	4,225 00
Departmental photographer			800 00	800 00
Technical and other books of reference			577 94	577 94
Transportation commission			7,389 11	7,389 11
Gratuity to daughters of late Thos. Ryan			200 00	200 00
" " father of late Jos. Charette			166 66	166 66
" " widow " Jas. Russell			66 66	66 66
" " " " A Nadeau			50 00	50 00
" " " " J. Harrington			100 00	100 00
" " Dist. Supt. Jas. Wilson, on retiring			300 00	300 00
Public Works agency B.C.			920 89	920 89
Totals, Miscellaneous			220,887 72	220,887 72

PART II.—STATEMENT A.—EXPENDITURE—*Concluded.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
RECAPITULATION.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Totals Public Buildings—					
Nova Scotia		78,325 52	11,316 61	30,198 20	119,840 33
Prince Edward Island		12,040 00	398 26	6,485 83	18,924 09
New Brunswick		36,033 69	7,638 70	25,834 29	69,506 68
Maritime Provinces generally				379 61	379 61
Quebec		131,201 47	55,542 61	89,471 62	276,215 70
Ontario		489,762 74	251,471 10	293,439 26	1,014,673 10
Manitoba		40,926 39	10,770 75	23,587 84	75,284 98
North-west Territories		68,316 35	6,359 40	22,482 16	97,157 91
British Columbia		112,285 18	5,670 13	25,642 73	143,598 04
Yukon				53,675 28	53,675 28
Public Buildings generally				21,026 25	21,026 25
Totals, Harbours and Rivers—					
Nova Scotia	34,193 87	183,847 88	71,103 46	14,151 26	303,296 47
Prince Edward Island	13,784 67	30,887 99	13,684 74	2,516 24	60,873 64
New Brunswick	56,341 69	88,908 10	33,604 87	4,401 26	183,255 92
Quebec	129,225 60	1,327,490 93	73,686 08	26,383 73	1,556,786 34
Ontario	421,508 55	461,974 32	123,585 84	17,512 87	1,024,581 58
Manitoba	21,855 39	26,832 18	1,111 83	2,405 04	52,704 44
British Columbia	77,171 52	63,922 41	30,663 92	14,257 76	186,015 61
Yukon		9,569 22			9,569 22
Harbours and Rivers generally	4,788 77			8,547 73	13,336 50
Totals, dredges and dredging plant		331,661 84	42,520 10		374,181 94
" slides and booms		45,934 53	17,538 41	64,076 43	127,549 37
" roads and bridges		90,302 64	9,157 75	4,298 90	103,759 29
" telegraph lines		59,079 90	8,880 15	317,733 46	385,693 51
" Miscellaneous				220,887 72	220,887 72
Grand totals of expenditure	758,870 06	3,689,303 28	754,704 71	1,289,395 47	6,492,273 52

PART II.—STATEMENT B.—Showing the cost of the following services for each Public Building, &c.; (the total for each province being carried into Statement 'A.')

Name of Building.	Rents.	Salaries of Engineers &c.	Heating.	Lighting.	Water.	Total.
Nova Scotia.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Amherst post office &c		415 00	204 76	210 33		830 09
Annapolis "		400 00	203 35	110 25	40 00	753 60
Antigonish "		401 82	121 43	92 96	10 00	626 21
Arichat "		119 14	275 60	5 90		400 64
Baddeck "		258 60	133 50	57 30		449 40
Dartmouth "		251 80	161 70	93 75	22 40	529 65
Digby "		409 57	192 50	323 09	60 00	985 16
Guysboro' "		50 62	8 58	129 02		188 22
Halifax, Asst. Receiver General's office.	1,217 40		51 40	83 80		1,352 60
" custom house (new)				15 00		15 00
" dominion building	2,531 91	1,784 51	3,388 52	422 99		8,127 93
" drill shed		1,000 00				1,000 00
" engineer's office	374 00					374 00
" examining warehouse	500 00	453 19	211 14	63 30		1,227 63
" immigrant shed		633 25	668 19	707 60		2,009 04
Kentville post office, &c		401 15	4 25	226 25	37 50	669 15
Liverpool "		404 75	215 00	171 10	18 00	808 85
Lunenburg "		324 15	213 50	220 40	59 00	817 05
New Glasgow "		305 54	137 43	262 72	100 00	805 69
North Sydney "		403 60	186 75	459 51	29 50	1,079 36
Pictou custom house		42 25	162 62	8 50	25 00	238 37
" post office		544 08	163 80	255 40	25 00	988 28
Springhill post office, &c		467 02	239 80	395 48	45 00	1,147 30
Sydney "		419 03	135 45	779 68	35 00	1,369 16
Truro "		395 12	134 85	333 77	30 00	893 74
Windsor "		419 27	324 42	209 50	75 60	1,028 19
Yarmouth "		424 29	340 00	647 60	72 00	1,483 89
Totals, Nova Scotia, carried to statement A, page 3	2,091 40	11,475 15	6,274 53	9,250 73	1,106 39	30,198 20
Prince Edward Island.						
Charlottetown Dominion building		2,242 07	590 19	1,903 59	231 50	4,967 35
" engineer's office	240 00					240 00
Montague post office		167 48	96 78	40 30		304 56
Summerside "		422 55	389 13	162 24		973 92
Totals, Prince Edward Island carried to statement A, page 3	240 00	2,832 10	1,076 10	2,106 13	231 50	6,485 83
New Brunswick.						
Bathurst post office, &c		470 52	484 69	80 92		1,036 13
Carleton, St. John, post office	85 85	100 00	46 00	76 75	8 50	317 10
Chatham post office, &c		413 24	375 57	199 30	22 50	1,010 61
Dalhousie "		402 80	283 87	21 60		708 27
Fredericton "		430 75	354 38	629 47	25 50	1,440 10
Marysville "		58 35	126 99	9 96		195 30
Moncton "		425 10	270 31	361 40	134 00	1,190 81
Newcastle "		420 76	285 28	168 20		874 24
Richibucto "		50 00				50 00
St. John custom house	22 00	1,977 85	1,814 59	535 75	518 62	4,868 81
" immigration bldg.		1,200 00	1,331 73	903 36	61 61	3,496 70
" post office		1,481 35	884 84	2,708 78	709 56	5,870 38
" savings bank		5 85	344 79	113 71	19 38	483 73
Tracadie Lazaretto		203 75	1,296 61			1,499 36
St. Stephen's post office, &c		400 00	188 05	368 10	48 00	1,004 15
Sussex "		245 81	599 45	85 20		930 46
Woodstock "		453 20	294 54	161 25	34 00	942 99
Totals, New Brunswick, carried to statement A, page 3	107 85	8,739 33	8,981 69	6,423 75	1,581 67	25,834 29

PART II.—STATEMENT B.—Showing the cost of the following services for each Public Building, &c.—*Continued.*

Name of Building.	Rents.	Salaries of Engineers, &c.	Heating.	Lighting.	Water.	Total.
Quebec.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Aylmer post office		72 03	143 75	243 20	33 00	491 98
Berthierville post office		8 45	154 77	37 20	33 00	233 42
Buckingham " &c.		124 32	286 57	132 45	18 60	561 94
Coaticook " &c.		406 75	278 73	265 17	40 00	990 65
Drummondville " &c.		321 54	177 00	96 96	25 82	621 32
Dundee custom house			61 25			61 25
Granby post office &c.		315 15	197 75	103 69	225 00	841 59
Fraserville " &c.		312 33	278 75	111 47	65 00	767 55
Hochelaga "		205 84	191 28	143 07	60 14	600 33
Hull " &c.		150 00	76 51	588 35	261 52	1,076 38
Jolliette " &c.		411 18	263 66	102 60	108 00	888 44
Lachine "		118 30	258 00	90 00	29 52	495 82
Laprairie "		58 78	108 08	40 85	40 00	247 71
L'Assomption post office			212 50			212 50
Lévis immigrant building			25 00			25 00
Montmagny post office		3 96	22 00	46 00	27 00	98 96
Montreal civil service exam. office	200 00					200 00
" custom house		2,337 39	957 92	742 82	319 13	4,357 26
" Dominion public buildings		1,700 04				1,700 04
" drill hall		732 00				732 00
" examining warehouse		3,223 94	2,737 41	1,105 68	513 11	7,580 14
" immigration office	500 00					500 00
" inland revenue office		623 67	336 84	179 92	99 91	1,240 34
" post office	168 16	14,227 96	1,255 64	8,593 48	896 82	25,142 06
" Windsor sta. P.O.D.	1,300 00					1,300 00
" sta. B	1,650 00					1,650 90
" P.O. Brch. Metcalf street	250 00					250 00
Peribonka immigrant shed		300 00	91 50			391 50
Quebec citadel buildings	32 50	470 96	1,415 89	64 47		1,983 82
" clerk of works office	60 00	75 00				135 00
" clerk residence	25 00					25 00
" culler's office		540 00	566 36	30		1,106 66
" custom house		622 67	1,146 98	522 89	800 00	3,092 54
" Dominion public buildings P.O.		10 45				10 45
" engineer's offi. exam. warehouse	381 96	1,571 38	1,948 92	101 69	450 00	4,453 95
" immigration office	22 50	36 74	907 97	601 34		1,568 55
" observatory					50 00	50 00
" post office building		1,701 69	1,020 64	801 16	750 00	4,273 49
" Queen's wharf building, marine			1,477 15		750 00	2,227 15
" inland revenue			56			56
Richmond post office, &c.		379 97	322 89	225 21	10 42	938 49
Rimouski public building		160 23	328 29	83 55		572 07
Roberval immigration shed		335 48	313 00	60 75		709 23
Sherbroke post office &c.		503 38	490 18	621 93	50 00	1,665 49
Sorel " &c.		506 37	772 16	502 25	250 00	2,030 78
St. Eustache post office	60 00					60 00
St. Roch "			47 24	38 15		85 39
St. Henri "			223 39	108 72	29 28	361 39
St. Hyacinthe " &c.		548 60	468 02	884 17	150 00	2,050 79
St. Jérome " &c.		426 70	258 75	182 40	50 00	917 85
St. John's " &c.		358 51	103 56	315 05	60 00	837 12
Three Rivers custom house		300 00	434 74	112 26	48 60	895 00
" post office		453 60	333 20	174 50	62 00	1,023 30
Valleyfield post office	352 50		67 50	42 60		462 60
Victoriaville post office	1 00	134 65	281 52	206 92	50 04	674 13
West Farnham post office		27 32	100 60	118 30	10 00	256 22
Totals, Quebec (carried to statement A, page 5.	5,003 62	34,820 33	21,144 42	18,391 52	6,365 31	85,725 20
Ontario.						
Almonte post office, &c.		407 90	199 50	84 05		691 45
Amherstburg post office, &c.		418 50	301 12	129 05	35 00	883 67
Carried forward		826 40	500 62	213 10	35 00	1,575 12

PART II.—STATEMENT B.—Showing the cost of the following services for each Public Buildings, &c.—*Continued.*

Name of Building.	Rents.	Salaries of Engineers &c.	Heating.	Lighting.	Water.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward		826 40	500 62	213 10	35 00	1,575 12
Ontario—Con.						
Amprior public building		415 90	283 06	194 71	33 19	926 86
Barrie "		430 56	526 30	174 34	50 00	1,181 20
Belleville "		670 87	770 89	805 51	85 50	2,332 77
Berlin "		439 53	239 29	403 10	13 27	1,095 19
Brampton "		411 25	207 82	251 47	32 00	902 54
Brantford "		617 86	203 79	341 13	38 00	1,200 78
" examining warehouse			197 73			197 73
Brockville public building		416 22	425 37	767 05	170 00	1,778 64
Carleton Place "		310 67	203 75	90 94		605 36
Cayuga "		65 55	108 12	44 13		217 80
Chatham "		551 98	210 33	317 84	42 50	1,122 65
Clinton "		48 15	125 30	70 85		244 30
Cobourg post office, &c		423 83	223 30	461 95	23 94	1,133 02
Cornwall public building		481 24	320 00	686 05	75 00	1,562 29
Deseronto "		472 65	520 80	243 96	39 00	1,276 41
Dundas post office	375 00	50 00	69 05	55 00		549 05
Fort William public building			221 25			221 25
Galt "		432 89	236 03	297 39	32 50	998 81
Gananoque custom house			148 37	94 00		242 37
" post office		7 59	97 57	141 00	5 00	251 16
Goderich public building		441 05	399 77	209 84	60 00	1,110 66
Guelph "		465 15	339 91	284 81	28 08	1,057 95
" post office	145 00					145 00
Hamilton custom house		615 50			18 60	634 10
" exam. warehouse				78 55	33 40	111 95
" drill shed		360 00				360 00
" immigration building					8 55	8 55
" post office		1,319 60	2,005 10	1,801 57	750 00	5,876 27
Ingersoll public building		428 40	427 63	292 04	26 21	1,174 28
Kingston custom house		221 80	193 95	120 48	61 20	597 43
" exam. warehouse					12 95	12 95
" inland revenue office				72 00	22 59	94 59
" military college		2,760 00				2,760 00
" post office		164 75	274 00	1,083 33	48 06	1,570 14
" drill hall		200 00				200 00
Lindsay post office		408 50	237 80	83 95	22 50	752 75
London custom house		1,204 03	935 51	756 69	105 00	3,001 23
" post office		637 98	980 34	1,354 34	80 00	3,052 66
Napanee post office		460 60	277 00	96 40	69 44	903 44
Niagara Falls public building		427 35	195 37	406 25	45 00	1,073 97
Orangeville post office		400 00	194 75		20 00	614 75
Orillia "		314 54	181 50	87 10	32 50	615 64
Ottawa bacteriological laboratory			161 00	16 25		177 25
" experimental farm			1,284 88	453 74		1,738 62
" geological museum		648 00	689 73	323 94		1,661 67
" Major's Hill greenhouse		288 00	392 00			680 00
" national art gallery			91 00	38 00		129 00
" observatory (Cliff st.)				16 00		16 00
" parliamentary and departmental buildings		30,682 73	36,342 69	15,872 70		82,898 12
" post office		1,440 00	1,234 81	752 32		3,427 13
" printing bureau		10,307 18	11,318 15	825 65		22,450 98
" supreme court		948 00	727 18	333 99		2,009 17
Ottawa, rented buildings—						
Bank of Ottawa chambers (old balance)	2,000 00					2,000 00
Dairy commissioner's office			245 00			245 00
Census building	6,500 00	864 00	865 00	226 50		8,395 50
Chief analyst's office			259 03	2 50		261 53
Chief astronomer's office				42 00		42 00
Carried forward	9,020 00	63,020 30	66,031 84	31,284 46	2,118 98	171,475 58

SESSIONAL PAPER No. 19

PART II.—STATEMENT B—Showing the cost of the following services for each Public Building, &c.—*Continued.*

Name of Building.	Rents.	Salaries of Engineers, &c.	Heating.	Lighting.	Water.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	9,020 00	63,020 30	66,031 84	31,284 46	2,118 98	171,475 58
Ontario—Concluded.						
Ottawa, rented buildings—*Con.*						
Customs statistical offices	1,500 00	288 00	385 00	207 00		2,380 00
Custom house (Wood's building, Queen st.)	1,200 00	576 00	595 00			2,371 00
Exhibition commissioner's offices	500 00		112 00	37 00		649 00
French translator's offices	465 00		122 75	497 51		1,085 26
Gas inspector's office				10 56		10 56
Geological museum annex	600 00			19 56		619 56
Imperial building (agriculture and immigration)	4,200 00			226 50		4,426 50
Labour department	1,200 00			113 00		1,313 00
Langevin block (Howell estate)	5 00					5 00
Militia department, (Wood's building, Slater st)	5,520 00	600 00	987 24	445 00		7,552 24
Marine stores			152 00			152 00
N. W. M. Police stores	855 00		28 00	84 00		967 00
Sparks' chambers (various dept's.)	1,347 00			42 00		1,389 00
Surveyor General's offices	2,250 00	288 00	533 67	252 01		3,323 68
Public works dept., workshops, &c.	1,470 00	288 00	819 35	654 60		3,231 95
Paris public building		410 75	223 00	146 04	63 60	843 39
Pembroke post office		431 85	209 57	249 60	28 00	919 02
Peterboro' custom house		305 35	203 96	75 30	50 00	634 61
" post office		315 45	273 65	231 50	75 00	895 60
Petrolea "		416 10	290 63	35 77	34 76	777 26
Picton "		444 65	234 00	120 07	29 50	828 22
Port Arthur "		328 25	249 80	164 70		742 75
Port Colborne "		277 20		138 10	7 50	422 80
Port Hope "		418 15	238 00	449 30	8 83	1,114 28
Prescott custom house		1 85	441 50			443 35
" post office		411 80	237 75	193 44	120 00	962 99
Rat Portage public building		409 50	606 00	276 09	70 76	1,362 35
Sarnia "		347 01	422 36	29 38		798 75
Smith's Falls post office		308 10	177 25	132 76	66 57	684 68
Stratford public building		678 95	238 90	291 04	63 50	1,272 39
Strathroy "		431 10	348 67	216 12	3 60	999 49
St. Catharines "		429 16	255 40	266 60	48 65	999 81
St. Thomas "		438 93	356 50	568 45	52 28	1,416 16
Toronto civil service exam. office	142 00					142 00
" custom house		1,529 59	615 86	241 02	55 88	2,442 35
" Dominion public building		1,290 00				1,290 00
" drill shed		991 13				991 13
" examining warehouse		4,698 54	1,021 86	287 82	76 17	6,084 39
" ss. inspector's office	337 50					337 50
" inland revenue office		663 90	363 10	175 88	32 02	1,234 90
" sta. B. post office	750 00					750 00
" post office		4,696 42	1,687 57	6,183 62	542 60	13,110 21
" " stables	132 00					132 00
" asst. rec. gen		366 00	28 00	62 72		456 72
" engineers office	710 00			12 00		722 00
Trenton post office		459 50	197 50	153 48	75 00	885 48
Walkerton "		406 50	294 60	201 15	31 00	933 05
Windsor public building		819 00	515 75	824 75	96 00	2,255 50
Windsor armoury		400 00				400 00
Woodstock "		459 32	327 75	311 86	38 20	1,137 13
Totals, Ontario, carried to Statement A, page 7	32,203 50	88,644 15	79,825 78	45,911 76	3,788 40	250,373 59
Manitoba.						
Brandon experimental farm			380 69			380 69
" post office, &c		623 65	945 08	909 05	127 00	2,604 78
Carried forward		623 65	1,325 77	909 05	127 00	2,985 47

PART II.—STATEMENT B.—Showing the cost of the following services for each Public Building, &c.—*Continued.*

Name of Building.	Rents.	Salaries of Engineers &c.	Heating.	Lighting.	Water.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward		623 65	1,325 77	909 25	127 00	2,985 47
Manitoba—Concluded.						
East Selkirk immigrant building	5 00		744 00			749 00
Dauphin immigrant building			97 50			97 50
Minnedosa Dominion land office	735 00		139 75			874 75
Portage La Prairie post office		404 90	711 15	282 30		1,398 35
Winnipeg clerk of works	50 00					50 00
" custom house		345 50	929 90	167 38	58 16	1,500 94
" Dominion lands office			338 17	35 13	65 67	438 97
" engineer's office	424 50					424 50
" examining warehouse			533 62	89 40	28 03	651 05
" immigrant shed			1,512 90	709 50	792 59	3,014 99
" post office		2,896 22	3,017 21	3,792 69	738 25	10,444 37
" immigrant hospital				181 85	64 28	246 13
" weights and measures off	480 00					480 00
Totals, Manitoba, carried to Statement A, page 7	1,694 50	4,270 27	9,349 97	6,167 30	1,873 98	23,356 02
North-west Territories.						
Alameda Dominion lands	195 00		17 59			212 59
Calgary court house, &c		500 90	273 65	113 40	255 00	1,142 95
" engineer's	140 00					140 00
" Dominion lands office			6 50			6 50
" immigrant building	1 00		256 84			257 84
" land and registry office		3 60	76 50			80 10
" post office		595 25	1,402 67	956 25	340 00	3,294 17
Carnduff court house		413 73	67 50	1 86		483 09
Didsbury, immigrants building	80 00					80 00
Edmonton, court house	450 00	682 90		60 02		1,192 92
" Dom. lands & registry office		407 50	93 30	3 50		504 30
" immigrant shed	450 00		304 75			754 75
" post office	27 00	5 80		300 55		333 35
Indian Head experimental farm			475 00			475 00
Grenfell, immigrant building	48 00					48 00
Leduc, immigrant hall	90 00					90 00
Lethbridge court house & custom house		4 70	165 50	1 75		171 95
" immigration building			71 50	42 49		113 99
" post office	18 00	523 35	10 00	161 72	36 00	749 07
Lacombe, immigration building	117 00		25 00			142 00
Lamerton, immigrant building	80 00					80 00
Macleod custom house			20 00			20 00
" immigrant hall	130 00					130 00
" court house	225 00	175 00	122 15			522 15
Medicine Hat, court house		540 00	23 25	27 77	11 07	602 09
Maple Creek, court house	10 00					10 00
Moose Jaw, "		408 95	246 95	5 20		661 10
Moosomin "		603 50	488 29	16 33		1,108 12
Prince Albert, Dom. lands & reg. office		410 85	285 00	17 61		713 46
" immigrant shed	40 00		74 25			114 25
Qu'Appelle, court house			5 00			5 00
Red Deer Dominion lands office	72 00					72 00
" immigrant shed	180 00		34 00			214 00
Regina, court house		1,050 25	870 00	228 66		2,148 91
" Dominion lands & reg. office		563 50	674 00	280 72		1,518 22
" immigrant building	1 00		152 50			153 50
" post office		13 50	201 44	48 24		263 18
Rosthern, immigrant shed			146 30			146 30
" lands office	120 00					120 00
Carried forward	2,474 00	6,903 28	6,589 43	2,266 07	642 07	18,874 85

SESSIONAL PAPER No. 19

PART II.—STATEMENT B.—Showing the cost of the following service for each Public Building, &c.—*Continued.*

Name of Building.	Rents.	Salaries of Engineers, &c.	Heating.	Lighting.	Water.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward	2,474 00	6,903 28	6,589 43	2,266 07	642 07	18,874 85
North-west Territories Concluded.						
Saskatoon, court house	6 00					6 00
Saskatoon, immigrant building		13 24	792 90			806 14
Strathcona immigrant shed	216 00		613 92			829 92
Teulon, immigrant building	77 00					77 00
Wetaskiwin, immigrant building	100 00					100 00
" court house	45 00					45 00
Wolseley, court house		26 35	327 75	32 54		386 64
" lands office		540 00				540 00
Yorkton, court house		41 66	9 59			51 25
Yorkton, immigrant building	315 00		440 86			755 86
Totals, North-west Terri.; carried to statement A, page 8	3,233 00	7,524 53	8,774 45	2,298 61	642 07	22,472 66
British Columbia.						
Agassiz experimental farm			78 77			78 77
Atlin, post office		152 25	90 00	67 50		309 75
Kamloops public building		610 70	586 71	95 45		1,292 86
Kaslo, drill hall			80 00			80 00
Nanaimo post office		600 00	70 00	243 00	36 00	949 00
Nelson, public building		657 75	290 60	623 70	45 00	1,617 05
Esquimalt, custom house			14 52			14 52
New Westminster, post office		616 65	94 96	663 64	31 02	1,406 27
Rossland public building		807 52	497 90	353 55	73 32	1,732 29
Vancouver drill hall			610 67			610 67
" examining warehouse	1,800 00	540 00	4 26	35 96		2,380 22
" post office		1,293 20	438 28	1,273 10	75 16	3,079 83
" custom house				540 67		540 67
Victoria examining warehouse			10 00			10 00
" barracks			49 55			49 55
" drill hall			41 15			41 15
" indian office		604 15	177 05	88 14	17 50	886 84
" military store			239 73			239 73
" post office		2,913 70	633 03	1,465 26	46 40	5,058 39
" old post office					95 00	95 00
" public works	84 00					84 00
William's Head quarantine station	60 00		3,129 55	40 00		3,229 55
British Columbia generally		37 17				37 17
Totals, British Columbia carried to Statement A page 9	1,944 00	8,833 09	7,136 73	5,490 06	419 40	23,823 28
Dominion buildings generally			1,468 34			1,468 34
Totals	16,905 87	119,921 04	88,031 41	75,017 52	16,008 72	315,884 56

PART II.—STATEMENT C.—Showing amounts loaned by Government under the authority of special Acts of Parliament and upon the recommendation of the Hon. the Minister of Public Works, during the Fiscal Year 1903-4.

To whom loaned.	Parliamentary authority.	Purpose.	Amounts.
			$ cts.
Harbour Commissioners of Montreal	Acts 59 Vict., ch. 10 and 61 Vict., ch. 47	General work of improvement to harbour	600,000 00
Harbour Commissioners of Montreal	Act 1, Ed. VII, ch. 9	Construction of a steel grain elevator	300,000 00
	Total		$900,000 00

DEPARTMENT OF PUBLIC WORKS,
ACCOUNTANT'S OFFICE,
OTTAWA, Dec. 22, 1904.

A. G. KINGSTON,
Accountant.

PART III

REPORT

ON

PUBLIC BUILDINGS THROUGHOUT THE DOMINION

FOR THE FISCAL YEAR ENDED JUNE 30, 1904.

BY THE

CHIEF ARCHITECT

PUBLIC WORKS, CANADA,
CHIEF ARCHITECT'S OFFICE,
OTTAWA, December, 7, 1904.

F. GÉLINAS, Esq.,
Department of Public Works.

SIR,—I am sending you herewith, annual report of works executed under this branch during the year ended June 30, 1904.

D. EWART,
Chief Architect.

PROVINCE OF NOVA SCOTIA.

HALIFAX.

APPRAISER'S OFFICES.

A new partition was erected, some glazing done and repairs made to plumbing under the supervision of C. E. W. Dodwell, resident engineer and inspector of buildings, Nova Scotia Halifax.

CUSTOM HOUSE.

This building which was described in a previous report has been carried on continuously during the fiscal year and is still in progress.

DOMINION BUILDING.

A quantity of new furniture, including cabinets for railway mail service, chart table, &c., for Marine and Fisheries office were supplied as well as the necessary electric lamps, &c. Repairs were effected to heating, plumbing, lighting, mail hoist, ceilings, roof, woodwork, painting, glazing, lock boxes, locks and furniture.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Halifax, N.S.

IMMIGRATION BUILDING.

Some repairs, additional to those reported last year, were effected to partitions, gates, wiring, furniture, &c., under the supervision of C. E. W. Dodwell, resident engineer and inspector of public buildings, Halifax, N. S.

LAWLOR'S ISLAND.

QUARANTINE STATION.

Extensive repairs were made to the engines and boiler of the steamer 'Argus.'

The foundation walls of the hospital and of the storehouse near the steward's residence were rebuilt ; the large 3rd class detention building was partitioned into

thirty-two cubicles ; the other and nearby 3rd class detention building was sheathed round the foundation posts ; the back half of the storehouse was floored in cement and lined with wood ; two rooms in the hospital for saloon passengers were wood-lined and finished and repairs were made to chimney and roof.

Work done under the supervision of C. E. W. Dodwell, resident engineer and inspector of public buildings, Halifax, N.S.

SYDNEY.

DOMINION BUILDING.

Addition to Main Building.

This is an addition of 30 feet in length by 40 feet in breadth on Dorchester street elevation with which it is continuous and similar in detail, number of stories and constructive material. The basement will be excavated and continuous with the original basement ; the ground floor will add 20 feet of its length to the post office, the remaining portion being divided up into a front vestibule, a brick safe, a lavatory room and a mail entrance ; on the first floor will be two rooms, two brick safes, while in the attic will be four rooms.

Plans, &c., prepared by this department.

Clerk of works, Duncan A. Gillis.

Contractors, Rhodes & Curry.

PROVINCE OF NEW BRUNSWICK.

FREDERICTON.

PUBLIC BUILDING.

A fire extinguishing apparatus consisting of hydrants and hose on all floors attached to a standpipe connected to main on street was installed. New eaves troughs were supplied and fixed to back porch ; some painting was done in caretaker's quarters and minor repairs were affected to roof, plumbing, doors, &c.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

MILITARY STABLES.

On July 9, 1903, a contract was entered into for the construction of this building, which is of wood, 20 feet by 44 feet, one and a half story on a pile foundation. The roof and external surface of the walls are covered with steel shingles. On the ground floor are a carriage room, a loose box, a harness room, a loose box, and three stalls and on the upper floor, a hay-loft and a grain store.

Plans, &c., prepared by this department.

Clerk of works, H. M. Clarke.

Contractor, C. J. B. Simmons.

SERGEANT-MAJOR'S QUARTERS.

On August 3, 1903, a contract was entered into for the construction of this building which is one and a half story of wood, 33 feet 8 inches by 16 feet 8 inches on a stone foundation, having a one story adjunct 19 feet 2 inches by 10 feet 10 inches,

in rear, on a stone foundation. There is a cellar under the main portion ; the ground floor has two rooms as well as a hall and vestibule in the main portion and a kitchen and pantry in the adjunct; the first floor has three bedrooms, a bathroom and a passage.

Plans, &c., prepared by this department.
Clerk of works, H. M. Clarke.
Contractor, C. J. B. Simmons.
This building is completed.

MARYSVILLE.

POST OFFICE.

Owing to the flooding of basement from a broken sewer on adjacent property, a new 3-inch plank drain 65 feet in length was laid, the earth about the buildings down to the footings excavated ; the walls to ground level covered with a cement concrete casing 6 inches thick and the trench about building filled in. The old sewer was removed and the basement thoroughly cleaned.

Work done under the supervision of D. H. Waterbury, of this department, St. John, N.B.

PARTRIDGE ISLAND.

QUARANTINE STATION.

Building 'A,' the Hospital.—An addition was made at western end to serve as a furnace-room and coal store and a hot-water heating system installed. The water service was repaired and partly renovated.

Building 'B,' Detention House.—A drain was laid and the furnace, range and plumbing were repaired.

Building 'C,' Detention House.—The W.C.'s in the lavatory rooms were removed and cement latrines constructed. The iron smoke pipes of heating furnaces were removed and brick flues in basement substituted therefor. Some grading was done and the drainage improved. New roller window blinds were provided.

Steward's House.—A stove was supplied and some minor general repairs effected.

Building 'E,' Doctor's House.—The roof of wing was covered with composition ; several rooms had ceilings whitened as well as papering and painting done and some minor repairs effected.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

RICHIBUCTO.

PUBLIC BUILDING.

This building was described in my report of last year ; meanwhile it has been finished, fitted up and furnished and is heated by a hot-water system.

Plans, &c., prepared by this department.
Clerk of works, Cyrille Comeau.
Contractor for the construction of the building, James Reid.
Contractor for heating system, Frank Powers.

SUSSEX.

PUBLIC BUILDING.

The shingling of roof was removed and a galvanized iron covering substituted ; a portion of the foundation wall was rebuilt ; the brickwork and masonry was re-

pointed; stand-pipes, hydrants, hose, &c., were put in for all floors to afford protection from fire; a complete plumbing and drainage system with fixtures, such as w.c.'s, lavatory basins, sink, bath, boilers, &c., was installed, the walls, ceilings and woodwork were cleaned, tinted, painted and varnished, and repairs were made to floor, woodwork, back stoop and outside steps.

Work done under the supervision of D. H. Waterbury, of this department, St. John, N.B.

ST. JOHN.

CUSTOM HOUSE.

The retaining wall which had caved in last autumn, was restored in cement concrete. The entire front elevation and the south end of the building had the stonework pointed ; some of the stone cornice corbels which had fallen were restored. A wooden partition was built to inclose the lower basement hall alcove and provide storage. The time ball apparatus was overhauled, repaired and improved throughout. A stone cap was placed on brick pier of transit in observatory ; the lifting rigging of the hatch was renewed and two special chairs were supplied the observatory. The hoist of the Customs Department was overhauled and put in good working order. The five lavatory rooms were cleaned, kalsomined and tinted, and the woodwork varnished. Two offices on first floor were painted,the ceilings whitened and a cabinet varnished ; two on ground floor were kalsomined, the ceilings whitened and a cabinet varnished ; shelves and a shelf counter were built in express-room; sundry repairs were made to woodwork, plumbing, copper roofing and electric bells.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

POST OFFICE.

On the letter carriers' flat the partitions were removed and the apartments formed into one room, all the walls and ceilings therein were made good, the heating coils and electric wiring were rearranged and improved and 60 feet lineal of tables supplied. The Princess street entrance door was taken off and replaced by a new one, and repairs were done to some doors and woodwork. A new urinal and tank was supplied and connected on second floor,and some repairs were done to the plumbing and electric bell services. An electric clock was set up in the lobby and conectend with the regulator clock at the observatory. New rubber stamping pads were supplied. The elevator was overhauled and put in order and the elevator well bricked up. Repairs were made to copper roof covering and troughs, ironmongery of doors and windows, furniture and fittings. Two windows were fitted with luxfer prisms to improve the lighting in basement.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

SAVINGS BANK.

A bracketed shelf was put up in public lobby for use as a writing desk; some gas tubing was supplied for vault lights, and repairs were made to floor of banking office, to the asphalt covering of area and to the plumbing. The boiler room was lime whitened, the ceilings of same rooms and halls were whitened. the walls painted and the radiators bronzed.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

ST. JOHN.

IMMIGRATION BUILDING.

A portion of this building was damaged by a fire which caught from the burning of a city warehouse, and the making good involved repairs and renovation of roof, cornice, windows, wall covering, doors and furniture. Alterations of the position of partitions were made in several places, and a number of new partitions, partly glazed, were erected on first floor. At the south western end of building a new porch containing entrance and stairway was built having walls, doors, windows, floors similar to those in the building. The end lavatory rooms were transformed into a furnace room to contain the boilers for heating the large shed near by. Improvements were made in floor of boiler-room to render it completely water-tight. Fire hose was supplied and repairs made to cooking range and furniture. A coal shed was built under the broad stairs of the new shed.

All done under the supervision of D. H. Waterbury, of this department, St. John, N. B.

ST. JOHN, NORTH (PORTLAND).

POST OFFICE BUILDING.

On February 15, 1904, the building was sold by the government to Dr. J. E. Maher.

ST. JOHN WEST (CARLETON).

POST OFFICE.

The brickwork was pointed, the slate roof repaired and in part renewed; the woodwork, doors, plumbing and waste pipes and glazing were repaired; the cupola was painted and the front doors varnished.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

PROVINCE OF PRINCE EDWARD ISLAND.

CHARLOTTETOWN.

DOMINION BUILDING.

Re-arrangement and alteration of ground floor.

Changes are in progress for the enlargement of the postal accommodation. The floor area of the post office is being increased in width nine feet, and that of the Savings Bank decreased. The original brick division wall between the savings bank and the post office is to be removed, and be replaced by brick piers which are to carry iron beams supporting the brick division wall on first floor. The partition between the bank and post office will have glazed doors and borrowed lights. The additions to the post office fittings will comprise an entire new box screen, money and registered letter office and fittings, opening table, parcel post stand, two public desks and stamp vendor's office. The w.c's. in rear will be removed and placed under the landing of main staircase. A door is to be broken through outer wall of room originally occupied as ground floor w.c., for use as a mail entrance. Change in position of a number of

heating radiators and lavatory basins is necessary owing to the general scheme of attraction as also changes in basement walls, &c., &c.

Plans prepared by this department. Clerk of works, John Harper.

Caretaker, H. & S. Lowe.

PROVINCE OF QUEBEC.

ACTONVALE.

POST OFFICE BUILDING.

On June 28, 1904, a contract was entered into for the construction of this building fronting on Main street. It is to be two and one half stories of brick on a stone basement supported on a pile foundation and measuring 43 feet 9 inches by 30 feet 10½ inches; the partitions, roofs and floors are wood, excepting the basement floor, which is concrete. The basement is to contain heating apparatus, fuel and w.c's.; on the ground floor is to be the post office, stairway hall and entrances, and on the upper floor are to be seven living rooms exclusive of a kitchen and a bath-room.

Plans, &c., prepared by department.

Contractor, Joseph Bourque.

GROSSE ILE.

QUARANTINE STATION.

A large number of the fences were coated with coal-tar composition.

HEALTH DIVISION.

There are in progress and nearing completion two buildings as follows :—

Works offices.—A wooden building on a concrete foundation, 28 feet by 30 feet, two stories and basement, the deck roof covered with galvanized iron. The ceilings, walls and partitions of the rooms are to be plastered, and those of the halls and passages sheathed with wood. There is to be a one story wing also of wood, 15 feet by 12 feet. Heating is to be by hot air and there is to be water service, plumbing and drainage.

Kitchens.—These are eight divisions of a wooden one story building on cedar posts, 150 feet 9 inches long by 15 feet 9 inches broad, having galvanized iron roof covering. There are to be four brick chimneys of two flues each. A water service, sink and drainage to each kitchen. The original detached kitchens were reshingled and generally repaired. The steamer 'Challenger' was repaired and repainted.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

LEVIS.

CATTLE QUARANTINE.

The pump and vehicle buildings were repaired; the employees' building had new trimmings to doors, windows, gallery, stairs and wainscotting, as also general repairs throughout ; several of the sheds had new stone piers ; 4 pumps with piping were connected to wells; a stove for heating water was supplied, and a clock for the use of the night watch.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

MONTREAL.

CUSTOM HOUSE.

Glazed partitions were erected in long room and in gauger's room ; a hardwood floor was laid in gauger's room ; electric light was installed in several additional offices ; iron mats were supplied at entrances ; a new wash basin was fitted up ; some furniture was supplied and repairs made to roof, plumbing, glazing and painting.

Work done under the supervision of C. Desjardins, clerk of works Montreal, P.Q.

EXAMINING WAREHOUSE.

On March 28, 1904, a contract was entered into for the construction of six freight elevators in place of the original freight elevators which were too small and otherwise unsuitable. Changes were made in plan necessitated by removal of the dry goods, hardware, groceries and cigar departments to third floor. Glazed partitions, hardwood floors, counters, iron screens and other fittings and furniture were provided for the various departments, on the first floor which was completely cleaned and had the brickwork repaired and whitewashed and the woodwork repainted or oiled. The second floor is about to be treated similarly. An electric lighting system was installed throughout the building. New lavatories have been fitted up with closets, lavatory basins and sinks ; the iron fence was repaired and painted and the roof and gutters repaired.

Work done under the supervision of C. Desjardins, clerk of works Montreal, P.Q.

INLAND REVENUE BUILDING.

The interior of the building was repaired, cleaned, tinted and painted. An automatic water filter was fitted in the water supply main at its entrance to the building. A new bath and a lavatory basin were fitted up for the caretaker ; some new heating coils were added ; some new partitions, counters, shelving, &c., were erected and the floors of some of the passages laid in hardwood. Repairs were effected to water service and roof.

Work supervised by C. Desjardins, clerk of works, Montreal P.Q.

POST OFFICE.

A system for heating water for cleaining purposes was fitted up ; some new coils were added to the heating system ; new electric lights were added to the lighting system ; hardwood and glazed partitions were erected ; one office floor was laid and in hardwood; brass standards were placed outside the registry wickets; the ground floor and basement rooms were cleaned, tinted and painted, some rooms on first floor cleaned, tinted, papered and decorated. New combination locks were supplied to money order vaults. Repairs were effected to money order vault, heating system, plumbing, lighting, drainage and roof. The hardwood throughout ground floor was revarnished and some carpets and furniture supplied.

Work supervised by C. Desjardins, clerk of works, Montreal P.Q.

QUEBEC.

HIS EXCELLENCY'S RESIDENCE, CITADEL.

Repairs were effected to plumbing, bells and lighting, some of the woodwork was repainted and the interior of the building cleaned and put in order for the annual visit of Their Excellencies.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

CUSTOM HOUSE.

Some shelving and sets of drawers were furnished, and repairs were effected to plumbing, furniture, bells, clocks, &c.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

EXAMINING WAREHOUSE.

The flooring on the first floor was relaid; part of the drainage system was renovated ; the elevator engine was inclosed by a glazed wooden partition ; a new w.c. and a tiled floor in toilet room were put in for Harbour Commissioners ; a bath and a skylight were put in the caretaker's apartments, and all the rooms thereof were painted. The halls of ground floor were painted and repapered and the appraiser's rooms recarpeted.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

IRON FOUNDRY.

The ground was graded and levelled; the cupola was enlarged; piping put in oven; a steam-heating plant was fitted up, and a toilet room with w.c. basin and tiled floor was made.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

IMMIGRATION BUILDING, LOUISE EMBANKMENT.

An additional three rooms were built and a porch as well ; new chimney caps were set; the roof was repaired; additions were made to plumbing services and drainage; the well was cleaned and the pipes thereto renewed; repairs were made to electric lights, pump, stove and hot water piping, and some furniture and carpets supplied to officers and matron.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

POST OFFICE.

Two offices and one hall on first floor were refloored in hardwood and one of these offices was replastered. Electric lighting was installed on first and second floors. The basement rooms throughout were painted and papered. Alterations and renewals were made in the original electric wiring and fixtures and repairs made to glazing, &c.

Work supervised by Ph. Béland, clerk of works, Quebec, P.Q.

TELEGRAPH OFFICE.

Two hundred and eighty boxes were supplied.

ST. HYACINTHE.

INLAND REVENUE BUILDING.

On July 30, 1903, a contract for the construction of this building which is situated on the corner of Girouard and St. Dominique streets, on a plot of ground having frontages of 85 feet 8 inches and 106 feet 11 inches, respectively, adjoining and west of the post office plot. The building measures 48 feet by 48 feet, and consists of two stories besides a basement, a sub-basement and an attic story. A tower 12 feet square with two additional upper stories contains the main entrance in the middle of the Girouard street frontage. The sub-basement occupies 20 feet in depth by the full breadth of the rear of the building and consists of a furnace-room, a fuel-room and a

stairway hall. The four succeeding flats have each a stairway hall 8 feet wide, running from front tower to rear of building ; the basement has in addition two large rooms, a w.c. room and a brick vault ; the ground floor, one room, 17 feet 6 inches by 36 feet, two, each, 17 feet 9 inches by 17 feet 6 inches, two brick vaults and entrance porch ; the first floor, 4 rooms 17 feet 9 inches by 17 feet 6 inches, a brick vault and a small room in tower and the attic 5 rooms, as well as bath-room and a w.c. room. The walls are of stone; the partitions in sub-basement, the walls of tower inside building and the vaults are of brick ; and the remaining partitions, the floors, excepting in basement, where it is concrete, as well as the roof are of wood ; the roof and dormers are covered with metal.

Plans and specifications prepared by this department.

Clerk of works, John Arbour.

Contractor, Paquet & Godbout.

THETFORD MINES.

PURLIC BUILDING.

On August 8, 1903, a contract was entered into for the construction of this building on lot No. 314, which has a frontage of 50 feet on Notre Dame street.

The building consists of a main portion 29 feet by 29 feet having basement, ground floor, first floor and attic. An adjunct in rear 32 feet 6 inches by 23 feet, having ground floor, first floor and basement, also an adjunct on the right side, one story and basement 15 feet 6 inches by 52 feet. The main portion, on the right side, comprises a basement, a ground floor for the post office and the upper floors for the customs offices and caretaker's quarters. The adjunct is for examining warehouse, customs offices, stairway to first floor and w.c. room. The walls of the basement are stone and those of the remaining stores brick ; the partitions, floors and roofs are wood ; the deck of the main portion being covered with tar and gravel.

Plans, &c., prepared by this department.

Clerk of works, Ant. Grégoire.

Contractors, Dussault & Pageau.

VALLEYFIELD.

PUBLIC BUILDING.

On September 14, 1903, a contract was entered into for the construction of this building on a plot of ground on the south side of Victoria street, extending back to Ste. Cecile street and having a lane on western side. There is a main portion 60 feet deep by 64 feet frontage, three stories and basement and an adjunct in rear, 67 feet deep by 28 feet broad, one story and basement. On the north-west angle of the main building is a tower, two additional stories in height. The ground floor of the main portion contains the main stairway, passage to adjunct, light shaft, brick vault and a post office 54 feet by 43 feet, lighted on three sides, and having an entrance on both at front and rear. In the adjunct are the examining warehouse, the gas inspector's office, the weights and measures office and the w.c.'s. On the first floor are the customs and inland revenue offices and a brick vault for the customs long-room, and in the second floor are eight rooms and bath-room for caretaker's quarters. Opening on the stairway between the ground and first floor is a mezzanine for w.c. and lavatory-room. The basement is for fuel and furnace-rooms. The walls of the basement and ground floor are stone, and of the remaining floors brick ; the partitions, floors, and roof are of wood ; the cornices and coping are metal covered and the roof is covered with tar and gravel.

Plans, &c., prepared by this department.

Clerk of works, Edmond Lemay.

Contractor, Théodore Bélanger.

PROVINCE OF ONTARIO.

ALEXANDRIA.

POST OFFICE BUILDING.

A site for this building was obtained on the corner of Catherine and Main streets, with frontages of 65 feet and 42 feet respectively, and, on October 23, 1903, a contract was entered into for the construction of the building thereon. It is two stories of brick on a stone basement with a wooden attic and having a portion at the angle of the streets, 12 feet by 12 feet carried up two additional stories in brick covered by a pyramidal roof. The basement will contain the heating apparatus, fuel and stores ; the ground floor, the post office and examining warehouse ; the first floor three rooms and a bathroom and the attic three rooms.

Plans, &c., prepared by this department.

Clerk of works, John R. Chisholm.

Contractor, Jos. Bourque.

BOWMANVILLE.

PUBLIC BUILDING.

A site on the corner of Temperance and King streets, with frontages of 99 feet and 66 feet respectively, was obtained and on November 2, 1903, a contract for the construction of the building was entered into. There is a main portion 64 feet by 32 feet, exclusive of projections, two stories basement and attic, a portion of which 12 feet by 12 feet is carried up two stories higher and covered with a pyramidal roof, and a one story and basement adjunct 15 feet by 32 feet. The external walls are of brick on a stone basement, the roofs, floors and partitions wood. There is a brick safe on the ground floor and one on the first floor. The ground floor of the main building is for the post office and that of the adjunct for the examining warehouse and w.c.'s ; on the first floor are five offices, a brick vault and a w.c. room; the attic, six rooms and a bathroom for the caretaker, and the basement is for heating apparatus, fuel and storage.

Plans, &c., prepared by this department.

Clerk of works, Ferdinand B. Whiting.

Contractor, Wm. Stuart.

BRANTFORD.

DRILL HALL.

On June 9, 1904, a contract was entered into for alterations and additions to this building.

The additions comprise a two-story and basement strip extending across Park street front ; an octagonal, three story and basement, tower on the corner of Park and River fronts; an additional story on leanto on river front and a small two story addition on Elizabeth street, to the caretaker's quarters. With these additions and some alterations the structure will contain as follows, viz.:—a basement under the park frontage for a shooting gallery, a stairway and a lavatory ; under the river front for furnace and fuel rooms and under the caretaker's quarters for store-rooms; on the ground floor besides the drill hall which is 166 feet by 78 feet, there are a band-room, quartermaster's stores, quarter master's office, eight armouries, an orderly room, a commanding officer's room and six rooms for caretaker. On the first floor a lecture room, a sergeants room, four officers rooms, a recreation room and lavatories.

Plans, &c., prepared by this department.

Clerk of works. L. H. Taylor, architect.

Contractor. Schultz Bros. Co.

COBOURG.

ARMOURY AND GUN SHED.

A contract was entered into on February 24, 1904, for the construction on a plot of ground having frontages on Spring, Albert and King streets, the front of the building to be on King street. The building is to be two stories in height, 112 feet in depth exclusive of a stairway lobby in the rear and an entrance porch in front by 74 feet in breadth excepting the front portion on King street which is 110 feet by 28 feet in depth. There are to be two stories of brick on a stone foundation, only a portion of which is to be excavated. The excavated portion will consist of a shooting alley extending throughout the entire front by a depth of 22 feet having in its rear a staircase hall, beyond which is to be a furnace and fuel room. The ground floor will comprise the field battery gun shed 83 feet by 35 feet, the garrison artillery gun shed 46 feet by 35 feet, five harness rooms, one armoury, two story rooms, three vestibules and three staircase halls. The second floor will have a recreation hall, two mess rooms, two commanding officers' rooms, two officers' rooms, two armouries, a quartermaster's room, two lavatory rooms and six rooms for the caretaker's residence. The partitions throughout and the covering of the skylights are to be galvanized iron; the floors and roof are to be wood ; the roof to be covered with tar and gravel.

Plans, &c., prepared by this department.

Resident architect, C. Carruthers.

Contractor, David S. Booth.

OTTAWA.

CENTRAL EXPERIMENTAL FARM.

Fifteen wire screens and 22 fly screens were furnished for the windows of the laboratory, and repairs were made to 18 chairs. The director's dwelling and those of 9 other officers had the interiors cleaned, painted, papered and tinted. The walls of conservatory and the plastering in 10 of the officers' dwellings were repaired.

Electric lighting was installed throughout the farm buildings and officers' residences.

The farm foreman's residence, a building which was on the farm at the time of purchase by the government, was overhauled and put in thorough repair. A cellar was excavated, the building was raised, a concrete foundation built thereunder and a hot water heating system installed.

Some additions, alterations and repairs were effected in connection with the plumbing and heating of the various buildings, and a quantity of wire fencing was put up.

Work done under the supervision of this department.

CENSUS OFFICES, SPARKS AND O'CONNOR STREETS.

This is a rented building. Four electire fans were installed, two on ground and two on first floor and minor necessary repairs effected.

EASTERN BLOCK.

New hardwood floors were laid in the attic rooms and corridors of the Department of Indian Affairs as well as in four rooms of the Auditor General's offices ; the walls and wood work of five rooms of the Auditor General's offices were cleaned and painted ; the attic rooms and corridors of the Indian Affiairs offices were cleaned, tinted and painted as also were nine rooms for the finance, three for the Privy Council and five for His Excellency the Governor General. New sashes and frames were put in the rooms of the Indian Affairs in attic, and lights of glass were reglazed through-

out the building ; articles of furniture were supplied the various departments as well as rods and curtains, shelving, drawers and cushions, while articles of furniture were repaired. A number of steel fittings were supplied to the Auditor General's Department. Additional electric lights, &c., were installed such as portable desk lights, drop light shades, new lavatory basins and sinks, were set up and connected, and branch services from main to existing basins. New heating coils were fitted up, also electric fans and electric bell services put in. There were minor jobs such as lettering, painting, &c., and joinery. The double windows and summer blinds were taken off, stored, cleaned and put on periodically and the roofs, footpaths and roads kept free from snow during winter.

Work done under the supervision of this department.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

GOVERNMENT HOUSE.

On the morning of April 3, 1904, a fire broke out in the ground floor of the west wing of the hall resulting in the destruction of a part of the interior of the wing and of a part of the interior of the main house as well, also causing damage to carpets, fixtures, furniture, &c., both directly and by water. The damage to the building was immediately repaired ; a new skylight was built over the w.c.'s, and, a new hopper roof over the wing. The galvanized iron coverings of copings were renewed ; all the fireplaces had fire brick linings substituted for those of tile and the hearths broadened, and the lincrusta dado destroyed by fire was replaced in wood. A large quantity of new plastering, flooring, wood finishings, fixtures, painting, &c., as well as new electric wiring throughout the new wing were necessitated by the fire. In the main house the cock loft was floored the inside of the roof lathed with metal and plastered with asbestic, a brick firewall with iron door put in and a fire escape fitted on outside of wall—all as a protection against fire.

Additions were made to the system of drainage, which was referred to in last year's report, inclusive of 971 feet of 6 inch and 9 inch tile drains serving the workshops, stable and dairy, together with cedar curbs, cast iron grates, &c.

The stage in the ball room had the gas piping removed and electric wiring installed, new scenery was prepared and a temporary stepped floor laid throughout the ball room to fit it for use as an auditorium. A portion of the plastering of ball room and of tennis court was renewed. New screen doors were hung at entrance of cloak room, a book case, four stepladders and 85 packing cases of various sizes and uses were supplied. A new plate warming cabinet was supplied to the kitchen where some parts of the ranges, fireplaces, &c., were renovated and cleaned. A wooden lean-to 24 feet by 13 feet, for the storage of farming implements, was built at the rear of the small greenhouse. Two old lean-tos at gardener's house were pulled down and the shed straightened, underpinned and enlarged by an addition 30 feet by 12 feet, the roofs of old and new portions shingled and the walls clapboarded.

The cottage was cleaned throughout and a number of rooms papered, distempered and painted, including all the rooms in basement, which also had the woodwork painted. The verandah was repaired and painted and some carpet, a table and a number of chairs supplied.

The toboggan slides were pulled down, being unsafe, and a new slide 300 ft. by 47 ft. and 6 ft. wide, with all the necessary stairs, landing, rails, &c., was constructed on the original site.

At the hall there were 1,875 yards of painting, 955 yards of cleaning and tinting done, and 567 sup. ft. of broken glass renewed, exclusive of that done to the damaged portions of the house.

A quantity of china, earthenware, glass and napery, was supplied to make up deficiencies and the kitchen coppers were retinned.

The boat-house and float as well as the road thereto were kept in repair—157 ft. of new plank sidewalk and crossings were laid as well as all the existing walks kept in good repair; 327 ft. of close board fence 12 ft. high was built; 5 gates were renewed and repairs made to wooden and wire fences throughout. A wire netting 200 ft. long was put up along the flower borders adjoining the tennis lawn. Hot-bed sashes were supplied and the conservatories repaired and painted.

The two large lower lawns were regraded with additional soil and resodded. Fruit trees, bulbs, seeds, plants, gardening tools and other necessaries were supplied for kitchen and flower gardens.

The conservatories were kept in order, the lawns, drives, &c., rolled and otherwise tended. The ice-house was stored with ice. The roofs, paths, slides, rinks, &c., were cleared of snow by the departmental staff, by whom the grounds, lawns, gardens and plant houses were maintained.

The usual periodic cleaning, packing and unpacking were done ; arrangements for and attendance on entertainments were furnished, and the rinks, slides, &c., kept in order.

Works done under the superintendance of Wm. Hutcheson, clerk of works.

LANGEVIN BLOCK.

Two hundred and twenty-five yards of concrete flooring was laid in basement ; the fire-box of the steam boiler was re-lined with fire-brick; 4 rooms were cleaned, tinted and painted; one office had a new hardwood floor; 1 new glazed partition was put up; 16 cupboards and pigeon-hole cases were supplied to the Agriculture Department, and of other articles of furniture there were supplied 22 to the Agriculture Department, 35 to the Interior, and 58 to the Post Office Department. Considerable repairs were made to furniture and fittings, 53 panes of glass were reglazed and a large number of minor works, among which were 136 jobs of painting, lettering, &c., and 131 jobs of joinery.

A large number of steel fittings were supplied to the Agriculture, Interior and Post Office Departments. There were installed additional electric lights, as follows : 43 electric lamps, 19 drop lights, 116 drop lights, 2 ceiling lights, 74 portable lamp-stands, and 4 meridian electric lamps. The electric bell systems of the Post Office and Agriculture Departments were rearranged, an indicator box was put up in the Interior Department, as well as two new bell servies. One wall 'phone, one wash basin and one water closet were fitted up.

Work done under the supervision of this department.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

LABOUR DEPARTMENT.

This is a suite of rented offices, situated on Metcalfe street, opposite the Langevin Block. Three rooms were cleaned, tinted and painted, a large quantity of shelving was put in attic as well as cupboards and 8 pieces of furniture. Repairs were made to the glazing, painting and joinery.

GEOLOGICAL MUSEUM.

The laboratory room in basement was fitted up and the original drawing offices added to the library and fitted up with shelves, cupboards, pigeon-holes, book-cases, tables, chairs, drawer cases, &c. The walls of these as well as four of the offices were cleaned and tinted and the woodwork painted or oiled and varnished. The caretaker's quarters were cleaned, painted, papered, tinted, &c., throughout. Extensive repairs were made to walls and chimneys of the museum building, and a new chimney was

built. The rented annex was provided with a hot water heating apparatus, some additional electric lamps and drop lights, and plumbing and water supply services.

In the library the heating coils were altered and in part renovated, some additional coils were fitted up in one of the offices and alterations made to plumbing, &c.

Work done under the supervision of this department.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

MAJOR'S HILL PARK.

The new kiosk was completed and painted, the summer benches were repaired and painted. A plank sidewalk 80 feet long was laid on St. Patrick street and the sidewalk on Mackenzie avenue repaired.

PARLIAMENT BUILDING.

Four offices were cleaned, tinted and painted; one office had a new hardwood floor; a new porch was built at Commons messengers' entrance; 2 new windows were supplied the Senate, and the floor of the Library cleaned and polished. Forty-one pieces of new furniture and 500 map rollers were supplied; a large quantity of shelving was put up in Library and all the furniture of the House of Commons cleaned. Four additional transformers with marble switchboards, &c., were installed, as also 4 electric fans, one each of 12 ft. and 24 ft., and 2 of 16 ft. diameter; 41 additional electric lights with fixtures, wires, &c., complete, were installed; 4 new rooms in the attic were heated, lighted and fitted up on the Senate side, and also a new lavatory with w.c.'s, basins, lighting, &c. A new English gas stove was fitted up in the Commons restaurant, and a wash basin in the office of the clerk of the House.

The fire-boxes of the boilers were lined with fire bricks; 125 panes of glass were renewed throughout the building; 33 door-plates were lettered and there were 81 minor works of painting and 155 minor works of carpentry effected. Two porch roofs were covered with copper, new galvanized iron ventilation pipes were supplied the House of Commons, as well as 4 new chimney cowls. The carpets were taken up, cleaned and relaid, the double windows and summer blinds were taken off, stored, cleaned and put on periodically, and the roofs, roads and footpaths kept clear of snow during the winter.

Work done under the supervision of this department.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

PARLIAMENT GROUNDS.

A portion of the drain at the outlet in river was renewed, and a pier built at outlet. Two large concrete piers were built at the entrance of the dump. The roof of the summer house and all the benches were painted; 185 feet of new benches were provided. Repairs were made to the green-house, and 385 lights of glass renewed therein. Extensive repairs were made to railings in Lovers' Walk.

CITY POST OFFICE.

On January 4, 1904, the greater part of the first floor inside, the attic story and the unfinished loft over, were destroyed by fire, and the ground floor damaged by water, and immediate steps were taken by the provision of a temporary roof covering and other works to render it fit for re-occupation by the postal authorities; all of which was accomplished by January 28, 1904. The Customs and Inland Revenue

Department which had quarters in the building were removed to the Wood's building, Queen street and the Seybold building, Sparks and O'Connor streets, respectively. It is intended to take down the attic story walls, erect on the first floor walls another story similar thereto and replace the attic story thereon.

Plans, specifications &c., prepared and work carried on under the superintendence of the department.

PRINTING BUREAU—ADDITION TO WEST WING.

On January 13, 1904, a contract was entered into for a one story addition 50 feet in lengh by 53 feet in breadth to the north of the west wing. The walls are to be brick on a stone foundation, the ceiling of brick and iron and the floor cement concrete. There is a single row of columns lining with those of the press room and supporting the ceiling. Above the ceiling is a tar and gravel roof covering.

Plans, &c., prepared by this department.

Clerk of works, P. Canty.

Contractors, Wm. Doran and R. M. Devlin.

PRINTING BUREAU—MINOR WORKS, REPAIRS, &C.

Two rooms in attic were divided by partitions, a glass partition and platform for the linotype machines were built, a new roof was erected over a portion of the yard at the rear of the building and the carpenter's shop was re-shingled. A large portion of the woodwork was repainted and repairs made to glazing. Three hundred and fifteen square yards of granolithic footpaths with 220 feet lin. of gutter was laid outside. A new drain was excavated for and laid, two new manholes were built and a large number of the original drain pipes renewed. A 4 foot sidewalk of 2 inch plank was laid at the west side of the building and a 3 foot walk of similar material 46 feet long, from the building to the gate leading to Nepean Point. A new feed water heater was fitted up in boiler room, changes were made in the gas fixtures, thirty-five new jets were added and a new electric bell installed.

Work done under the supervision of this department.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

SUPREME AND EXCHEQUER COURTS.

All the offices, corridors, &c., of the Exchequer Court were cleaned, tinted and painted and the glazing repaired. Four pieces of furniture and two sets of large book-cases were supplied and repairs made to joinery. A portable electric lamp was supplied and a system of electric bells between registrar's and secretary's rooms installed.

Work done under the supervision of this department.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

ROYAL OBSERVATORY.

This building which was described in a previous report is in progress and is expected to be completed at an early date. A hot water heating apparatus is being installed.

Plans, &c., prepared and work superintended by this department.

Clerk of works, P. Canty.

Contractor for construction of the building, Théophile Viau.

Contractors for heating, Butterworth Bros.

REPAIRING STREETS, &C.

A drain was laid along the western side of the canal from the bridge to the river ; the sidewalk on Sappers bridge was repaired and partly renovated ; 2,400 square feet of granolithic sidewalk was laid along the Elgin street boundary of Cartier square ; scraping, cleaning and general repairs were done to the various roadways, footpaths and streets under the control of the department. Rubbish, scrapings and ashes were removed from the east block, west block, Langevin Block, Parliament Building, the workshops, printing bureau, the museums, the several rented buildings and the various streets and deposited at Nepean Point ; the grass at printing bureau, Wellington street, two bridges, fisheries museum and geological museum was kept clipped and the ashes removed from the boiler houses ; the roadways, sidewalks, footpaths, roofs and yards kept clean of snow during the winter.

Work done by the departmental staff, C. Leblanc, foreman.

WESTERN BLOCK.

The floor of the cement testing laboratory in basement with the bed rock under were taken out to a depth sufficient to allow of the placing of new testing machinery. Further works, in completion of this, will be done during the next fiscal year.

In twenty-one offices new hardwood floors were laid, seventy-seven rooms were cleaned, tinted and painted and picture moulding put up in fourteen rooms. There were 261 articles of furniture supplied the various departments throughout the building exclusive of 11 cupboards, 56 brass rods with curtains, 350 hat hooks with boards therefor, 500 wooden pins, 106 sets of map rollers, 6 cushions, 7 map racks, 615 packing cases and 400 window strips. A large number of steel fittings were furnished to the Railways and Canals, Public Works and Inland Revenue Departments. Six new sashes and frames were put in. 13 baize doors were provided and 13 rooms fitted up with shelving, &c. Seven glass partitions were erected and 177 lights of window glass reglazed. There were installed new electric lights as follows :—twenty-two drop lights, ten portable desk lights, one bracket, one meridian and four electroliers with an aggregate of nineteen lights. Four 12-inch electric fans with switches, &c., were installed.

The heating system was improved by the addition of the vacuum apparatus of the Webster system of steam heating.

Three new lavatory basins and a new urinal were fitted up and repairs and alterations made to portions of the bell service.

Of minor jobs of painting and lettering there were 957, and of joinery, 561. The roofs, roads and footpaths were kept free from snow. The winter sashes and summer blinds were cleaned, put on, taken off and stored periodically.

Work done under the supervision of this dpartment.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

BUILDINGS AND GROUNDS GENERALLY.

In addition to the works mentioned in the foregoing there are innumerable smaller works, *i.e.*, there are 535 items of repair done by the roofers, 278 done by the masons; items taking each from one to five days work of a tradesman besides material to accomplish ; and proportionally in connection with the other trades. Besides all these, in connection with the various other buildings, the property of the government, there are similar works of repair, painting, furnishing, tinting, &c., in connection with a number of rented buildings ; also such works as repairs to and renewals of coal and other sheds, works of a general character such as the erection and taking down and storing of porches, winter boarding outside steps, &c., &c., all of which are done by the departmental staff.

ST. CATHARINES.

DRILL HALL.

On June 2, 1904, a contract was entered into for the construction of this building at the intersection of Lake and Elizabeth streets, on the southwest corner. The building is to have a frontage of 218 feet on Elizabeth street and 106 feet on Lake street exclusive of two projections of seven feet six inches towards Elizabeth and minor projections on Lake street. The main hall is to be on the western side with a direct entrance on the North from Lake street and is to be 160 feet by 75 feet inside measurement. On the east and south of the main hall there is to be a two story and part basement range of building containing on the ground floor, the artillery gun shed, eight armouries, three harness rooms, a commanding officer's office, an orderly room, quartermaster's stores, a spare room, a lavatory room, the main entrance to the main hall and the stairway; in the basement the fuel and furnace rooms, and, on the first floor a lecture room, officers' mess room, three sergeants' rooms, a commanding officer's room, an orderly room, an ante-room, three store rooms, a reading room, a veterans room, a band-room and six rooms for the caretaker. The walls are to be bricked with stone dressings and on a stone basement, roofs and floors wood, the roof principals of iron and the roof covering in part metal and the remainder tar and gravel.

Plans, &c., prepared by this department.

Resident architect and clerk of works, G. Dolson.

Contractors, Messrs. Sullivan & Langdon.

TORONTO.

GENERAL POST OFFICE.

The contracts, for the lavatory addition to the general post office, the opening up of the ground floor from Adelaide Street through to Lombard Street, the alterations to the first floor, and the erection of a passenger elevator were completed.

A fire-proof vault was constructed and provided with steel fittings.

Additional fittings and furniture were also provided.

Alterations in the arrangement of the fittings and furniture were made, as the alterations to the building proceeded, and the usual repairs to the building and furniture were made.

Work supervised by S. G. Curry, architect, Toronto.

EXAMINING WAREHOUSE.

Alterations were made to the examining warehouse to provide separate and more commodious accommodation for the express companies until such time as the addition to the warehouse is completed. Repairs were made to the water mains and eavetroughs.

Work supervised by S. G. Curry, architect, Toronto.

RECEIVER-GENERAL'S OFFICE.

The walls and ceilings of the office of the Receiver-General were painted and a new burglar proof steel safe provided and placed in the vault.

Work supervised by S. G. Curry, architect, Toronto.

DRILL HALL.

The four corner towers of the drill hall were reroofed above the old roofs, some minor repairs made and a granolithic sidewalk laid in front of the building on University Street.

Work supervised by S. G. Curry, architect, Toronto.

TORONTO JUNCTION.

PUBLIC BUILDING.

A site for this building was procured having frontages on Keele street, Dundas street and lane, of 130 feet, 60 feet and 60 feet, respectively, and a contract for the construction entered into May 29, 1903. It is a two story brick building having a wooden mansard attic and a stone basement, measuring 58 feet by 42 feet 6 inches, together with a one-story brick adjunct on a stone basement measuring 16 feet by 42 feet 6 inches. There is a square tower over the principal entrance on Keele and Dundas streets, which extends up two additional stories and is covered with a pyramidal roof. The basement under the adjunct is floored in concrete, and is to contain the heating furnaces and fuel. The ground floor of the main portion is the post office and of the adjunct the examining warehouse; the first floor has the customs long room, collectors' offices, two spare offices and w.c. room, and in the attic are six rooms and a bath room for the caretaker. The floors, stairways, partitions of first floor and attic and the roofs are of wood, the deck and flat roofs being covered with felt and gravel, while the slopes and dormers are metal covered.

Plans, &c., prepared by this department.

Clerk of works, John Patterson.

Contractors, Joy & Needham.

WINGHAM.

POST OFFICE.

On June 24, 1904, a contract was entered into for the construction of this building on Josephine street. It is to be a brick building on a stone basement, consisting of a main portion 2½ stories and basement measuring 50 feet by 40 feet, a 4 stories and basement tower measuring 15 feet by 15 feet, and a one story and basement adjunct in rear 28 feet by 19 feet. The floors and roofs are to be wood. The basement will contain heating furnaces, fuel, water closets and store rooms; on the ground floor the main building is to be the post office and the adjunct the customs collector's office, and examining warehouse: on the first and attic floors there are in each six living rooms, exclusive of the bath room in attic.

Plans, &c., prepared by this department.

Contractor, S. S. Cooper.

PROVINCE OF MANITOBA.

WINNIPEG.

POST OFFICE.

A temporary wooden building to provide additional postal facilities was erected by permission of the city corporation on Haymarket square. In the post office build-

ing new money order office and savings bank were fitted up ; a fire-proof safe supplied to the customs parcel office ; some fittings and furniture to railway mail office, land offices, shelving and painting to Dominion lands office and painting for the Indian offices.

Work supervised by J. Ernest Cyr, clerk of works, Winnipeg, Man.

EXAMINING WAREHOUSE.

The public works offices were transferred from the post office building to the first floor of this building which was fitted up and re-arranged for their reception.

Work supervised by J. Ernest Cyr, clerk of works, Winnipeg, Man.

BRANDON.

POST OFFICE.

The customs offices were fitted up with cases for books and papers ; additional letter and newspaper boxes were furnished the post office, and the bag rack extended; some new furniture was supplied : two new outside porches were built and the fence gates were repaired.

NORTH-WEST TERRITORIES.

RED DEER, ALBERTA.

COURT HOUSE.

A site was obtained comprising lots 9 to 29, both inclusive, in block 18, together with the intervening public lane, thus providing a block having frontages on McKenzie avenue, Ross street and Main street, and on September 7, 1903, a contract was entered into for the construction of the building. The building will be 2½ stories of brick on a stone basement, measuring 53 feet by 34 feet exclusive of projecting porches. The basement is floored with concrete, has a brick vault and three brick cells, and is to contain heating furnace and fuel. The partitions excepting those of cells, the floors excepting basement, the roof, porches and stairways are wood. The ground floor contains two vestibules, two stairways, a passage, one brick safe, two offices for lands, a guard room, 3 cells for prisoners, a kitchen, a store-room and two projecting porches. There are four entrances, one in front, one in rear and two on the right side. On the first floor, mid-length, is the court room occupying all but 16 feet at either end and extending up into the attic. At one end of the court room are rooms for judge, jury and bar, and at the other a room for witnesses.

Plans, &c., prepared by this department.

Clerk of works, Hugh Clark.

Contractors, Johnston & Tait.

REGINA, ASSINIBOIA, WEST.

IMMIGRATION BUILDINGS.

A two and a half stories wooden building, 60 feet in length by 31 feet 6 inches in breadth with a one story, 16 feet by 14 feet in rear. There is no basement, the

building resting on a foundation of wooden blocks. There is a detached wooden building 16 feet 6 inches by 10 feet 6 inches for latrines.

On the ground floor of the main building are a hall, an office, a kitchen and six rooms of various sizes. The one story adjunct is for use as an outside kitchen. On the first floor are a passage from end to end and on either side, six rooms. The attic is unfinished.

Plans, &c., prepared by this department.

Clerk of works, John Morrison.

Contractor, D. C. Macdougal.

PROVINCE OF BRITISH COLUMBIA.

NANAIMO.

PUBLIC BUILDING.

On May 4, 1904, a contract was entered into for a one story and basement addition to accommodate the Customs Department. The addition will be of stone similar in detail to the original building 45 feet long by 40 feet broad and containing in the basement a brick safe opening into the examining warehouse under the original building, a w.c. room, a stairway hall and a furnace and fuel room ; the partitions and piers in basement are to be of brick and the floor concrete. The ground floor will contain the examining warehouse, an office for the collector and two brick vaults are opening into the long-room and the other into the post office in the original building. There is to be a public entrance on the street front and an entrance to the stairway hall from the post office.

Plans, &c., prepared by this department and work supervised by Wm. Henderson of this department, Victoria, B.C.

Contractor, Alexander Forrester.

NEW WESTMINSTER.

The ground adjoining the building was excavated, graded, covered with mould, seeded down with grass and the roads gravelled. A cement concrete gutter was laid at north-east end of grounds and the external surface of north-east wall plastered with cement mortar.

Work supervised by Wm. Henderson, of this department, Victoria, B.C.

ROSSLAND.

DRILL SHED.

A contract for the construction of this building was entered into on June 13, 1904. It is to be a brick building on a stone basement, the latter lined with brick and having brick partitions and concrete floor. The building is to be 102 feet in length, exclusive of an entrance porch 14 feet 10 inches by 8 feet 6 inches, and 52 feet in width. The basement story is 10 feet from floor to ceiling, and the ground floor 27 feet. In the basement are to be a shooting gallery 85 feet by 15 feet, an armoury 48 feet by 30 feet, a furnace-room, a fuel-room, a store-room, a shower-room and a water closet. The

ground floor excepting, 12 feet of the length, which is divided into officers' room and N.C.O. room, is the drill hall. There is a gallery above the officers' rooms at the end of the hall with a stairway thereto. The flooring, partitions and stairs on the ground floor as well as the roof are to be wood, the roof covering of metal.

Plans, &c., prepared by this department.

Clerk of works, R. W. Grigor.

Contractor, Geo. Gillett.

VANCOUVER

PUBLIC BUILDING.

The mails roadway was paved with wood blocks on a concrete foundation, properly drained, and the cement sidewalk in front of building repaired. Alterations were made in basement for caretaker's rooms involving building up openings in brick walls, also plastering, carpentry, papering, kalsomining and varnishing. The floor of public lobby was removed and replaced by one of oak. The stamp-vendor's office in lobby was removed, a new stamp-vendor's office was constructed and the writing desk was altered in position. Tables were made and pigeon-hole cases fitted up for delivery office and for sorting-room, two half doors for money order office and shelves in post office inspector's cupboard. Sixty-seven post office lock boxes were numbered, the bulletin boards were painted and lettered and iron bars were fitted in position outside of registry office. Partitions in customs long-room were taken down to give additional accommodation ; a platform and shelving was constructed and three brass plates engraved for customs. The flag-pole was painted and ball thereof gilded.

Work supervised by Wm. Henderson, of this department, Victoria, B.C.

DRILL HALL.

The external surface of the walls of building was plastered in cement mortar and the battlements and all stonework painted in mastic. All under the supervision of Wm. Henderson, of this department, Victoria, B.C.

VICTORIA.

DRILL HALL.

A cement concrete sidewalk having block paved driveways was laid along the Menzies street line of the property by the municipal staff of workmen.

INDIAN AFFAIRS AND MARINE OFFICE (OLD CUSTOM HOUSE).

A new picket fence was erected at front and sides of property with double gate for cart entrance to wharf and single for foot pasengers, and the old fences and gates were repaired. A new water main with connections to wharf was laid and lavatory basins fitted up in the offices of the boiler inspector and Superintendent of Indian Affairs.

The fire-places in Indian Department were built up and a new stove and pipes supplied therein. A bath was fitted up and connected in caretaker's quarters and the closet tanks were cleaned and repaired. The fences and flag pole were painted.

Work supervised by Wm. Henderson, of this department, Victoria, B.C.

OLD POST OFFICE BUILDING.

A cement concrete sidewalk was laid along the Menzies street line of the property by the municipal staff of workmen.

The cement work on main cornices of building and on firewalls at north and south ends was renewed and repaired. The south wall was plastered, the chimneys repaired with cement mortar. The ground floor joisting and flooring were renewed, the partitions underpinned and the sleeper walls repaired and in part renewed. One large plate glass window was inserted in the front, the skylights were renovated and a part of the gravel roof repaired. A new tank was supplied, and the plumbing cleaned out and repaired generally. The flag pole was taken down and securely replaced and painted. The whole of the front of the building as well as those portions of the ends exposed above adjoining buildings was painted.

Work supervised by Wm. Henderson, of this department, Victoria, B.C.

PUBLIC BUILDING.

The granite steps at public entrances were roughened to prevent slipping and a portion of the cement sidewalk was taken out and replaced. Heating stoves and pipes were supplied and fitted up in examining warehouse, the heating furnaces were provided with new gaskets and some new hangers were put in to suspend the large furnace smoke-pipe. One thousand feet of shelving was provided in basement for Assistant Receiver General and some openings in brick walls were built up anent same. A wash basin was fitted up and connected, and also a portable lamp provided for the Collector of Customs. Eight rubber mats, screw hooks, bulletin boards and a cupboard were supplied to the customs, a rug to the Savings Bank Department, and mail bag racks, letter racks, sorting table, two cases of pigeon-holes and a shelf on iron pillar for post office. Repairs were made to copper roof, cornices and vallies, cisterns in caretaker's quarters, bath connections, two wash basins and one wash basin waste, the passenger elevator, the doors of post office, an oak screen in Customs and the plastering in basement. One blind and also four lettered zinc signs were supplied and some bulletin boards lettered. Two hundred and twenty-five feet of shelving and one hundred and eight new lock drawers were fitted up in post office, and the mail bag rack on ss. 'Victoria' was fitted up with bag hooks. The stamp vendor's office was changed in position; a wash basin was fitted up and connected in the Savings Bank Department and a smoke consumer constructed in basement.

Work supervised by Wm. Henderson, of this department, Victoria, B.C.

WILLIAMS HEAD.

QUARANTINE STATION.

A concrete step was placed at the bottom of each flight of wooden steps throughout; the north wall of the boiler house was plastered with cement mortar ; the cement concrete floor in boiler house and the brickwork of boiler were repaired and the roof of boiler house was coated with pitch and gravel. New elbows were put on conductor pipes of main hospital and first-class detention buildings, a new engine cross-head and one arc lamp were supplied and the water supply pipes in main hospital building were renewed and repaired. The tramway on wharf was extended twenty-five feet. Two hundred feet of shelving was fitted up in laundry building.

Work done under the supervision of Wm. Henderson, of this department, Victoria, B.C.

DOMINION PUBLIC BUILDINGS, JUNE 30, 1904, EXCLUSIVE OF THE PENITENTIARIES, INDUSTRIAL SCHOOLS, MARINE HOSPITALS AND MOUNTED POLICE BUILDINGS.

PROVINCE OF NOVA SCOTIA.

Amherst, public building.
Annapolis, public building.
Antigonish, public building.
Arichat, post office.
Baddeck, public building.
" armoury.
Dartmouth, post office.
Digby, public building.
Guysborough, public building.
Halifax, custom house (in progress).
" Dominion building.
" drill hall.
" examining warehouses (rented building).
" immigration building.
" quarantine (Lawlor's island).
Kentville, public building.
Liverpool, post office.
Lunenburg, public building.
Middleton, armoury.
Nappan, experimental farm.
New Glasgow, public building.
North Sydney, public building.
Pictou, custom house.
" post office.
" quarantine station.
Springhill, public building.
Sydney, public building.
" quarantine station.
Truro, public building.
Windsor, public building.
" drill hall.
Yarmouth, public building.

PROVINCE OF PRINCE EDWARD ISLAND.

Charlottetown, Dominion building.
" quarantine station (South port).
Montague, post office.
Summerside, public building.

PROVINCE OF NEW BRUNSWICK.

Bathurst, public building.
Carleton (St. John, West), public building.
Dalhousie, post office.
Fredericton, infantry school.
" public building.
Marysville, post office.
Middle Island, quarantine.
Moncton, public building.
Newcastle, public building.
Portland (St. John, North), post office.
Richibucto, public building.
St. John, custom house.
" drill hall.
" immigration building.
" post office.
" quarantine (Partridge Island).
" savings bank.
St. Stephen, public building.
Sussex, public building.
" armoury.
Tracadie, Lazaretto.
Woodstock, public building.

PROVINCE OF QUEBEC.

L'Assomption, post office.
Aylmer, post office.
Berthierville, post office.
Buckingham, post office.
Coaticook, public building.
Drummondville, public building.
Dundee, customs house.
Fraserville, public building.
Farnham, post office.
Granby, public building.
Grosse Ile, quarantine station.
Hochelaga, post office.
Hull, post office.
Joliette, public building.
Lachine, post office.
Laprairie, post office.
Lévis, immigration shed.
" cattle quarantine.
Montreal, custom house.
" drill hall.
" examining warehouse.
" Inland Revenue building.
" post office.
Péribonka, immigration building.

PROVINCE OF QUEBEC—*Concluded.*

Quebec, artillery workshops.
" cartridge factory.
" citadel.
" custom house.
" drill hall.
" examining warehouse.
" immigration building.
" iron foundry.
" marine agency.
" observatory.
" post office.
Richmond, public building.
Rimouski, public building.
Roberval, immigration building.
St. Henri, post office.
St. Hyacinthe, public building
" inland revenue building.
St. Jérôme, public building.
St. Johns, public building.
" infantry school.
St. Régis, custom house.
Sherbrooke, public building.
Sorel, public building.
Thetford Mines, public building.
Three Rivers, custom-house.
" post office.
Valleyfield, post office (in progress).
Victoriaville, public building.

PROVINCE OF ONTARIO.

Alexandria, public building (in progress).
Almonte, public building.
Amherstburg, public building.
Arnprior, public building.
Barrie, public building.
Berlin, public building.
Belleville, public building.
Bowmanville, post office.
Brampton, public building.
Brantford, public building.
Brockville, public building.
" drill hall.
Carleton Place, public building.
Cayuga, post office.
Chatham, public building.
Clinton, post office.
Cobourg, public building.
Cornwall, public building.
Deseronto, public building.

PROVINCE OF ONTARIO—*Continued.*

Dundas, armouries.
" post office (rented building).
Fort William, public building.
Galt, public building.
Gananoque, custom house.
" post office.
Goderich, public building.
Guelph, public building.
Hamilton, public building.
" drill hall.
" custom house (old).
Ingersoll, public building.
Kingston, custom house.
" drill hall.
" Military College buildings, Fort Frederick.
" post office.
Lindsay, public building.
London, custom house.
" drill hall.
" infantry school.
" post office.
Napanee, public building.
Niagara Falls, public building.
Orangeville, post office.
Orillia, public building.
Ottawa, Central Experimental Farm
" drill hall.
" Eastern Departmental block.
" Fisheries Museum and Art Gallery.
" Geological Museum.
" Government House.
" Langevin block.
" laboratory (bacteriological).
" military store building.
" observatory.
" Parliament Buildings.
" Printing Bureau.
" post office, customs and inland revenue.
" Supreme and Exchequer Courts
" Western departmental block.
Paris, public building.
Pembroke, public building.
Petrolia, public building.
Peterborough, custom house.
" post office.
Picton, public building.
Port Arthur, public building.
Port Colborne, public building.
Port Dalhousie, custom house
Port Hope, public building.
Prescott, custom house.

PROVINCE OF ONTARIO—*Concluded.*

Prescott, Fort Wellington.
" post office.
Rat Portage, public building.
Sarnia, immigrant building.
Smith's Falls, public building.
St. Catharines, public building.
" drill hall.
St. Thomas, armoury
" public building.
Sarnia, public building.
Sault Ste. Marie, public building.
Strathroy, public building.
Stratford, public building.
Toronto, custom house.
" drill hall.
" examining warehouse.
" immigration building.
" infantry school and drill shed.
" post office.
" postal station 'A.'
" postal station 'C.'
" Junction, public building.
Trenton, public building.
Walkerton, public building.
Windsor, drill hall.
" public building.
Woodstock, public building.

PROVINCE OF MANITOBA.

Brandon, experimental farm.
" immigration building.
" public building.
Birtle, immigration station.
Dauphin, immigration station.
East Selkirk, immigration shed (old C.P.R. round house).
Fort Osborne, infantry school.
Minnedosa, immigration shed.
Portage la Prairie, public building.
Winnipeg, custom house.
" examining warehouse.
" immigration hospital.
" immigration hall.
" lands office.
" post office.

NORTH-WEST TERRITORIES.

Alberta.

Calgary, court house.
" immigrant shed.
" public building.
Edmonton, immigration shed.
" registry office.
" jail (in progress).
Lethbridge, public building.
" immigration building.
MacLeod, custom house.
" court house.
Red Deer, court house.
St. Mary's, custom house.
Strathcona, immigration building.

Assiniboia East.

Carnduff, court house.
Indian Head, experimental farm.
Moosomin, court house.
Qu'Appelle, immigrant shed.
Wolseley, court house.
Yorkton, court house.

Assiniboia West.

Medicine Hat, court house.
" immigration shed.
Moosejaw, court house.
Regina, court house.
" council chamber
" government house.
" government offices.
" immigration shed.
" land and registrar's office.
" post office.

Saskatchewan.

Battleford, commandant's residence.
" government house
" immigrant shed.
" magistrate's residence.
" registrar's residence.
" registry office.
Prince Albert, court house and jail.
" immigrant shed
" land and registry office.
Saskatoon, immigration building.

YUKON TERRITORY.

Clear Creek, mining office.
Dawson, administration building.
" court house.
" commissioner's residence.
" post office.
" departmental stores.
" telegraph office.
Whitehorse, post office.

BRITISH COLUMBIA.

Agassiz, experimental farm.
Kaslo, armoury.
Kamloops, armoury.
" public building.
Nanaimo, public building.
Nelson, public building.
" armoury.
New Westminster, drill hall.
" public building.
Revelstoke, armoury.
Rossland, public building.
" armoury.
Vancouver, immigrant building.
" drill hall and gun shed.
" public building.
Victoria, artillery barracks.
" drill hall.
" custom house (Marine and Indian Affairs offices).
" military storehouse.
" post office (old).
" powder magazine.
" public building.
William's Head, quarantine station.

PART IV

CHIEF ENGINEER'S REPORT

ON

HARBOUR AND RIVER WORKS

INCLUSIVE OF

GRAVING DOCKS AND DREDGING OPERATIONS

ALSO

ROADS, BRIDGES AND SURVEYS THROUGHOUT THE DOMINION.

REPORT OF THE CHIEF ENGINEER

Department of Public Works of Canada,
Chief Engineer's Office,
Ottawa, December 15, 1904.

Fred. Gélinas, Esq.,
Secretary,
Department of Public Works.

Sir,—I have the honour to submit the annual report on the various works under my charge during the fiscal year ended June 30, 1904.

These works comprise the construction and repair of wharfs, piers, breakwaters, dams, weirs, bank and beach protection works ; the improvement of harbours and rivers by dredging ; the construction, maintenance and operation of government dredging plant; the construction and maintenance of graving docks ; the construction, maintenance and working of slides and booms ; the construction and maintenance of interprovincial bridges and approaches thereto, and of bridges on highways of federal importance in the North-west Territories and the maintenance of military roads ; also hydrographic and ordinary surveys and examinations, inclusive of precision levelling and geodetic measurements which are required for the preparation of plans, reports and estimates ; the testing of cements, &c.

I have the honour to be, sir,
Your obedient servant,

EUG. D. LAFLEUR,
Acting Chief Engineer.

During the fiscal year 1903-04, surveys, examination or inspections were made at the following places :—

NOVA SCOTIA.

Abram's River, Yarmouth County.
Argyle Sound, Yarmouth County.
Avonport, Hants County.
Baddeck, Victoria County.
Bass River, Colchester County.
Breen Pond, Antigonish County.
Broad Cove, Inverness County.
Canning, King's County.
Charlo's Cove, Guysboro County.
Cheggogin, Yarmouth County.
Cheggogin Point, Yarmouth County.
Cherry Hill, Lunenburg County.
Cheverie, Hants County.
Church Point, Digby County.
Clam Harbour, Halifax County.
Country Harbour, Guysboro County.
Cow Bay, Halifax County.
Cribbin's Point, Antigonish County.
Cunningham's Point, Guysboro County.
Deep Brook, Annapolis County.
D'Escousse, Richmond County.
Devil Island, Halifax County.
Digby, Digby County.
Duncan's Cove, Halifax County.
East Jeddore, Halifax County.
Economy, Colchester County.
Five Islands, Colchester County.
Freeport, Digby County.
French Village, Halifax County.
Grand Etang, Inverness County.
Granville Centre, Annapolis County.
Grosses Coques, Digby County.
Hampton, Annapolis County.
Hantsport, Hants County.
Herring Cove, Halifax County.
Horton Landing, King's County.
Indian Harbour, Halifax County.
Iona, Victoria County.
Janvrin's Island, Richmond County.
Kingsburg, Lunenburg County.
Kingsport, King's County.
Little Bras d'Or, Cape Breton County.
Little Brook, Digby County.
Litchfield, Annapolis County.
Long Point, Inverness County.
Lower East Pubnico, Yarmouth County.
Lower West Pubnico, Yarmouth County.
Margaretville, Annapolis County.
Melbourne, Yarmouth County.
Meteghan, Digby County.
Meteghan River, Digby County.
Middle East Pubnico, Yarmouth County.
Mill Cove, Lunenburg County.
Musquodoboit, Halifax County.
Necum Teuch, Halifax County.
Neil's Harbour, Victoria County.
Newport Landing, Hants County.
Noel, Hants County.
Ogilvies, King's County.
Parker's Cove, Annapolis County.
Peggy's Cove, Halifax County.
Pembroke, Hants County.
Petite Rivière, Lunenburg County.
Picket Pier, King's County.
Plympton, Digby County.
Port au Pique, Colchester County.
Port Beckerton, Guysboro County.
Porter's Lake, Halifax County.
Port George, Annapolis County.
Port Maitland, Yarmouth County.
Poulamond, Richmond County.
Prospect, Halifax County.
Quoddy, Halifax County.
Rawdon, King's County.
Round Hill, Annapolis County.
Sandy Cove, Digby County.
Sanford, Yarmouth County.
Saulnierville, Digby County.
Scott's Bay, King's County.
Short Beach, Yarmouth County.
Spry Bay, Halifax County.
Summerville, Hants County.
Tancook, Lunenburg County.
Tenecape, Hants County.
Three Fathoms Harbour, Halifax County.
Tittle Passage, Guysboro County.
Tiverton, Digby County.
Upper Granville, Annapolis County.
Victoria, King's County.
Walton, Hants County.
Wedge Point, Yarmouth County.
Wentworth, Hants County.
West Arichat, Richmond County.
West Chezzetcook, Halifax County.
Westport, Digby County.
West Pubnico, Yarmouth County.
White's Cove, Digby County.
Windsor, Hants County.
Wolfville, King's County.
Yarmouth Bar, Yarmouth County.
Yarmouth Harbour, Yarmouth County.

PRINCE EDWARD ISLAND.

Aitken's Shore Pier, King's County.
Belfast Pier, Queen's County.
Belle River, Queen's County.
Cascumpec Harbour, Prince County.
Charlottetown (Marine & Fisheries Dep. Pier), Queen's County.
China Point Pier, Queen's County.
Cove Head Harbour, Queen's County.
Greek River Pier, King's County.
Higgin's Shore Pier, Prince County.
McPherson's Cove, King's County.
Mink River Pier, King's County.
Murray Harbour South, King's County.
Oyster Bed Bridge, Queen's County.
Savage Harbour, King's County.
Sturgeon Pier, King's County.
Vernon River, Queen's County.
Victoria Pier (Crapaud), Queen's County.
West Point Wharf, Prince County.
Wood Islands Breakwaters, Queen's County

NEW BRUNSWICK.

Anderson's Hollow, Albert County.
Bathurst, Gloucester County.
Bay du Vin (Lower), Northumberland County.
Beaver Harbour, Charlotte County.
Belliveau, Westmoreland County.
Black Brook, Northumberland County.
Buctouche, Kent County.
Burnt Church, Northumberland County.
Campbellton, Restigouche County.
Cape Tormentine, Westmoreland County.
Caraquet, Gloucester County.
Chockfish, Kent County.
Dalhousie, Restigouche County.
Edgett's Landing, Albert County.
Edmundston, Madawaska County.
Fort Dufferin, St. John County.
Fredericton, York County.
Gagetown Creek, Queen's County.
Grande Anse, Gloucester County.
Grand Falls, Victoria County.
Grimrose Canal, Queen's County.
Grindstone Island, Albert County.
Hillsboro, Albert County.
Hopewell Cape, Albert County.
Hopewell Hill, Albert County.
Lameque, Gloucester County.
Lord's Cove, Charlotte County.
Mace's Bay, Charlotte County.
Mispec, St. John County.
Mizonette, Gloucester County.
Negropoint, St. John County.
Neguac, Northumberland County.
Nelson, Northumberland County.
North Head, Charlotte County.
North-west Miramichi, Northumberland County.
Oromocto, Sunbury County.
Partridge Island, St. John County.
Pointe du Chêne, Westmoreland County.
Quaco, St. John County.
Richibucto, Kent County.
River St. John, York & Carleton County.
St. Andrews, Charlotte County.
St. George, Charlotte County.
St. Louis, Kent County.
St. Stephen, Charlotte County.
Sand Point (St. John Harbour), St. John County.
Seal Cove, Charlotte County.
Shippegan, Gloucester County.
Stonehaven, Gloucester County.
Tracadie, Gloucester County.
Tynemouth Creek, St. John County.
Upper Salmon River, Albert County.
Wilson's Beach, Charlotte County.
York Point (St. John Harbour), St. John County.

QUEBEC.

Bergeronnes, Chicoutimi County.
Bryson, Pontiac County.
Chambord, Chicoutimi County.
Escoumains, Chicoutimi County.
Mille Vaches, Chicoutimi County.
Portage du Fort, Pontiac County.
Port Neuf, Chicoutimi County.
Quebec, Quebec County.
River Ashouapmouchouan, Saguenay County.
Rivière Ouelle, Kamouraska County.
Rivière Valin, Saguenay County.
St. Alexis, Chicoutimi County.
St. Charles Borromée, Chicoutimi County.
St. Firmin, Chicoutimi County.
St. Gédéon Islands, Chicoutimi County.

Barrie, Simcoe County.
Bayfield, Huron County.
Baysville, Muskoka & Parry Sound County.
Beaverton, Ontario County.
Belle River, Essex County.
Blind River, Algoma County.
Burgess Township, Lanark County.
Burleigh Falls, Ontario County.
Colchester, Essex County.
Coldwater, Essex County.
Dunnville, Haldimand County.
East River, Muskoka County.
Echo Bay, Algoma County.
Emily River, Victoria County.
Etobicoke River, York County.
Fort William, Algoma County.
Gravenhurst, Simcoe County.
Hiawatha, Peterboro County.
Indian River, Peterboro County.
Judge's Lake,
Lake Scugog, Ontario County.
Lakes Simcoe and Couchiching.
Little Current, Manitoulin County.
Little Bobcaygeon River, Victoria County.
Malden, Essex County.
Manitowaning, Manitoulin County.
Matchadash, Simcoe County.
Matchadash Bay, Simcoe County.
McCraken's Landing.
Midland, Simcoe County.
Mitchell's Bay, Kent County.
Morpeth, Kent County.
Niagara, Lincoln County.
Oliphant, Bruce County.
Owen Sound, Grey County.
Parry Sound, Muskoka and Parry Sound County.
Penetanguishene, Simcoe County.
Pike Creek.
Pointe aux Barils, Muskoka and Parry Sound County.
Port Albert, Huron County.
Port Credit, Peel County.
River Thames, Middlesex County.
Rivière aux Puces, Essex County.
Rondeau and Patterson's Creek, Kent County.
Sarnia, Lambton County.
Stokes Bay, Bruce County.
Tenby Bay, Algoma County.
Washago, Simcoe County.
Waubaushene, Simcoe County.

PROVINCE OF NOVA SCOTIA.

ABBOTT'S HARBOUR.

Abbott's Harbour, some 30 miles from Yarmouth, the county town, is situated on the west side, and near the head of the peninsula forming the western side of Pubnico Harbour. It is about 2½ miles to the south of Argyle Sound. The harbour is formed by a small island lying about a hundred yards off the mainland. The entrance to the harbour to the south is protected by the island and the mainland, and the northern entrance is protected by a shingle beach, which, under the action of northerly and north-westerly seas, was liable to disappear and leave the harbour without protection. The harbour is the head quarters of numerous fishing fleet, and considerable quantities of cod, herring, lobsters and other fish are annually caught and exported.

In 1900-01, the department at a cost of $1,200, constructed a piece of cribwork beach protection, 235 feet long, 8 feet wide on top, 10 feet wide on bottom and 8 feet high. It is substantially built of round-log cribwork sheathed on the face with 5-inch sawed stuff, floored with 3-inch plank, well fendered and filled solid with stone ballast. It is admirably serving its purpose in protecting the beach from erosion.

In 1901-02, the department expended the sum of $1,105 in extending the beach protection work built the previous year, by a new piece of cribwork 180 feet long, 10 feet wide on top, plumb on the seaward side and battering one in four on the inner or land side. On the outer end, where the work is 14 feet high, is an 'L' 20 feet long and 10 feet wide on top. The remainder of the work is from 4 to 14 feet high. It is close-sheathed on the seaward side with 5-inch sawed spruce and covered on top with 3-inch plank.

In 1903-04, the sum of $625.58 was expended in extending the L of the beach protection work built in 1900-01, by a new block 32 feet long, 10 feet wide on top and from 18 to 20 feet high, substantially, built of round-log cribwork, close-sheathed on the seaward face and filled solid with stone ballast.

Spring tides rise 12 feet ; neaps 10 feet.

ABRAM'S RIVER.

Abram's river, is a small fishing and farming settlement of a couple of hundred people, situated 13 miles east from the town of Yarmouth. In 1903-04, the department expended the sum of $977.89 (in addition to $60 for purchase of site and the remains of an ancient cribwork wharf over which the new work is built), in constructing a cribwork and stone wharf. The work consists of a block of substantial cribwork 37 feet long, 12 feet wide and 15 feet high, with a road approach 100 feet long, walled up with stone on either side and filled with earth and gravel.

Spring tides rise about 12 feet, neaps 10 feet.

AMAGUADUS POND.

Amaguadus pond, Cape Breton county, lies on the northern side of east bay, the eastern arm of the Great Bras d'Or lake ; and is distant about three miles from Benecadie Point, at the entrance to and sixteen miles from the head of the bay.

It is a large sheet of water, about one mile in length and a quarter of a mile in width, with a depth of from 2 to 4 fathoms, separated from the bay by a beach of gravel overlying clay, of from 100 to 200 feet in width, and about 4 feet above the summer level of the lake. The outlet is at the eastern end of the beach, but as it is open only for a short period after freshets, and then is available to small boats only, the pond is not of any practical benefit to the inhabitants.

The sum of $2,000 was appropriated for expenditure during 1902-03 towards the construction of a wharf. The site was selected on the outside of the beach about 600 feet from its eastern end, and a plan and specification were prepared for a block and span wharf 128 feet in length and 20 feet wide with an 'L' on the eastern side of the outer end, 20 by 20 feet, extending into 11 feet at low water, constructed of round timber, with creosoted timber superstructure, and estimated to cost $4,000. Out of the amount voted the sum of $1,999 was expended in procuring nearly all the materials required for the construction of the proposed wharf.

During the fiscal year ended June 30, 1904, the sum of $3,460.97 was expended in procuring the balance of the materials required and in the construction of the wharf, as intended.

The total expenditure to June 30, 1904 is $3,980.52.

ARISAIG.

Arisaig, Antigonish county, is on the northern shore of the Northumberland Strait, about 14 miles to the westward of Cape George.

The pier built by the provincial government, prior to confederation, came under the charge of the federal government in 1870. It consisted of an approach 245 feet in length and of an outer portion, 174 feet in length, varying from 40 to 44 feet in width. The approach is constructed with stone retaining walls, filled in with brush, stone and clay, and the outer portion is of square native timber cribwork, sheathed at the outer faces.

Repairs and improvements were made from time to time, including the construction, during 1889-91, of a squared timber extension, 1,000 feet in length. During 1896, 1897 and 1898 the seaward face of the pier was strengthened and a block, 24 by 24 feet, built of native squared timber, was placed on the seaward side of the outer

end to strengthen the face-work, and to secure and retain a proposed extension of the stone talus, in which some 250 cubic yards of lathe stone were then placed.

In 1898-99, the stone talus along the seaward face of the pier was completed by the deposit of 482 cubic yards of large quarried stone, and some covering and fenders were renewed.

During the severe northwest gale of September 12, 1900, the work was slightly injured, and the sum of $292.18 was expended in the reconstruction of a portion of the approach, and in repairs and renewals on the outer portion.

The outer end of the work, built by the local government, for a distance of 120 feet, has been in a bad condition for some years. Temporary repairs have been effected from time to time, but as the timber was old and decayed and did not hold the fastenings, it became necessary to reconstruct the work down to low water mark, and towards this purpose the sum of $900 was appropriated for expenditure during 1902-3. With this amount a section of the old work 49 feet in length, was reconstructed, and the balance of the old work was temporarily repaired.

During the fiscal year 1903-04, the sum of $2,488.62 was expended in completing the reconstruction of the outer end of the work built by the local government, down to low water, in sheathing its outer face, and in placing additional heavy stone on the talus along the seaward face of the pier.

The depth of water at the outer end of the pier, at low water springs, is 10 feet. Spring tides rise 5 feet.

Total expenditure to June 30, 1904, including refund of $541.41 to provincial government, is $38,417.50.

BABIN'S COVE.

Babin's Cove, Richmond county, is on the north side of Arichat Harbour, Ile Madame, and nearly opposite its western entrance.

A wharf, intended for winter service, was constructed by the department, under contract, during 1893, 1894 and 1895, and connected with the public road, by a road 410 feet in length. The wharf is 100 feet in length, and consists of a stone abutment, 20 by 20 feet on top, with sides and outer end sloping 1½ to 1, an inner block, 20 by 20 feet, and an outer block 25 by 40 feet, on top, with openings or spans of 17½ feet between the blocks, and between the inner block and the stone abutment. The blocks are constructed of round native timber. and the outer faces of the outer block are close-sheathed.

The outer end of the wharf, is 21 feet high, the top is 5 feet above high water springs, and the depth of water at the outer end, at low water, is 11 feet. Spring tides rise 5 feet.

During 1903-4, the sum of $99.34 was expended in constructing a warehouse on the outer end of the wharf. The building is 16 feet in length, 10 feet in width, and 7 feet in height of post; it has a 1½-inch spruce flooring, one door 6 feet wide and a small window at the end, and the roof is covered with cedar shingles.

The total expenditure to June 30, 1904, is $3,254.15.

BAILEY'S BROOK.

Bailey's brook, Lismore, Pictou county, is a large stream emptying into Strait of Northumberland, at a point about ten miles to the eastward of the entrance to Merigomish harbour, and six miles to the westward of Arisaig.

The sum of $2,000 was voted for expenditure during 1902-3, towards the opening of a permanent channel through the beach at the mouth of the brook, to permit boats to enter it for shelter, and for the construction of channel protection works on the outside.

The works proposed to effect the improvements consist in cutting a channel through the beach, about 290 feet in length and 30 feet wide in the bottom, with a depth of 2 feet at low water spring tides, or 6½ feet at high water ; the construction of a shear dam on the western side of the channel, 130 feet in length and 12 feet wide, founded at low water, and protected with sheet piling on the channel face and outer end ; and the construction of a breakwater on the Carleton side of the channel, 240 feet in length and 20 feet wide on top, constructed of round timber cribwork and extending out into 3 feet at low water, to prevent the sand from closing in, and to serve at the same time as a boat landing.

The amount voted for expenditure during 1903-04, was expended in procuring most of the timber required for the construction of the protection works.

During the year ended June 30, 1904, out of the amount voted for expenditure, viz., $3,000, the sum of $2,742.48 was expended in the construction of the breakwater on the eastern side of the entrance, and in the excavation of the channel above referred to, leaving the construction of the dam still to be done, to complete the proposed improvements.

Total expenditure to June 30, 1904, $4,742.41.

BAYFIELD.

Bayfield, Antigonish county, is on the south coast of St. George's bay, eight miles east from Antigonish harbour, and fifteen miles west from the entrance to the Strait of Canso. the harbour being formed by Pomquet island and outlying reefs.

Pomquet island is about three-quarters of a mile long, and is separated from Pomquet Point, on the mainland, by a strait 1,850 feet wide, with a depth of 4 feet at low water in a channel 400 feet wide.

Wharf.—In 1857, the construction of a wharf was commenced by a joint stock company on the west side of the harbour, a quarter of a mile south from Pomquet Point. It was handed over to the provincial government and completed in 1887 ; it was a block and span structure 402 feet in length, extending to 9 feet at extreme low water. In 1887-88 the two outer and adjoining blocks were raised, repaired and close-piled ; the central block and the shore block were cut down to low water ; and a continuous work was constructed between the outer blocks and the shore.

By the great gale of December 1, 1890, the work was carried away down to from 6 feet below low water at the outer end, to 3 feet above low water at a point 112 feet from the inner end.

In 1892-93 a contract was entered into for the construction of a new wharf. The work under contract was completed, and the approach to it was improved by one of the departmental dredges, in 1893-94.

The new wharf is 442 feet in length, including 33 feet of rubble masonry, 319 feet of block and span open-faced cribwork 25 feet wide, and 90 feet of close-faced cribwork in two blocks each 60 by 30 feet, placed at right angles. The substructure of the open-faced cribwork and of the outer close-faced cribwork is of creosoted North Carolina yellow pine, and the superstructure of native timber. The depth at extreme low water at the outer end is 11 feet. Spring tides rise 4 feet.

Since its completion, the blocks of both open and close-faced work have settled considerably, principally on the northern side.

In May and June, 1896, the sum of $348.37 was expended in levelling up 127 feet of the block and span work and in slight repairs to the covering between the outer close-faced blocks.

During the fiscal year 1903-4, the sum of $3,074.57 was expended in raising and repairing the outer end and in renewing the stringers, covering the cap-timbers over the whole structure.

Breakwater.—A breakwater 400 feet in length was constructed at Pomquet Point in 1879, and extended on a further length of 310 feet in 1888. The work consisted of

a cribwork core 18 feet in average width, covered with stone sloping on the seaward side three to one, and on the inner side one and one-half to one. It continued undisturbed until the occurrence of the great gale of December 1, 1890, when the stone covering was stripped off nearly to high water level, to within 160 feet of the inner end.

During the years 1892-93, and 1895-96, the breakwater was repaired and extended. The work done included an extension 70 feet in length, with an 'L,' or return, at the outer end 40 feet in length.

In the year 1897-98 the sum of $999.73 was expended in reconstructing the stone covering of the breakwater in places where it had been disturbed. About 4,000 superficial feet of the top was reconstructed with 263 cubic yards of large stone, 163 cubic yards of which was old stone displaced and 200 cubic yards of new stone brought one mile to the public wharf, thence by scow a quarter of a mile to the breakwater.

With the exception of some disturbance of the stone covering and of the displacement of some of the stones forming the covering at the outer end, the breakwater remained in fairly good condition until December 5, 1902, when it sustained serious damage during a northerly gale, accompanied by an exceptionally high tide. The covering stones were carried away for a length of 458 feet (184 to 642 feet from the inner end) down to the top of the cribwork, or to within about 1½ feet of extreme high water, and deposited over the inner slope; and the covering stones from 726 feet from the inner end, outwards were more or less disturbed. The repairs proposed included the construction of a concrete wall 525 feet in length over the seaward face of the cribwork (150 to 525 feet from the inner end) and the replacing of the stone covering.

During the fiscal year 1903-04, the sum of $6,789.83 was expended in procuring and storing 800 barrels of cement and some other materials, and in the construction of 30 lineal feet of concrete wall.

BENOIT COVE.

Benoit Cove, Antigonish county, it situated on the southern shore of St. George's bay, about two miles to the eastward of Harbour Aux Bouches.

The Cove, so-called, is only a slight depression in the coast line, and is used by the fishermen of the district for a landing; but as the beach between high and low water was strewn with boulders, it was at times dangerous to make a landing with boats, the sum of $800 was voted for expenditure during 1903-04, for the improvement of the landing by the removal of the boulders.

Out of the amount voted, the sum of $799.91 was expended in the removal by blasting of some 120 boulders, of from 1 to 3 cubic yards in size, off the beach between high and low water, a distance of about 200 feet, and in constructing with the stone removed, a rough breakwater at the western end of the clean beach, 120 feet in length, and extending out 5 feet at low water.

BIG HARBOUR.

Big harbour, or Port Bévis, Victoria county, is on the northern side of the Great Bras d'Or channel, about fifteen miles to the westward of its entrance into the Atlantic.

Plans and specifications for the proposed work were prepared, and on April 28, 1904, a contract for the construction of the wharf was entered into for the sum of $3,875.

The work under contract is a block and span structure, with creosoted timber substructure, extending into 13 feet at low water, 81 feet in length, measured on the centre line, and 20 feet wide, with an 'L' on the eastern side of the outer end, 20 by 20 feet, and a road approach from the wharf to the public road, 113 feet in length on the centre line. The wharf consists of a shore abutment 11 feet long, of an inner block 20 feet long, and of an outer block 20 by 40 feet, with openings or spans between

them 15 feet in length. The blocks are to be constructed of round timber, fully ballasted, protected by fenders on all faces, and with close-sheathing around the outer block.

At the close of the fiscal year the work had not been started.

BIG POND.

Big Pond, Cape Breton county, is on the south side of East bay, the eastern arm of the Great Bras d'Or lake, about thirteen miles from the head of the bay, and twenty-five miles from the city of Sydney.

Big Pond is so called on account of the existence here of a large sheet of water, separated from the bay by a beach.

During 1874-5, a cut was made through the beach, from the bay into the pond, and its sides protected with cribwork, but there being no large streams discharging into the pond, the slight rise and fall of the tide (about 1 foot) did not produce sufficient scour to keep the opening clear, and it soon filled up with sand.

A block and span wharf, 260 feet in length, was constructed by the department during 1887-88-89, but being constructed entirely with native timber, in a few years it was destroyed by the teredo, the outer end was carried away by ice, and it was decided to abandon it.

In 1899, a report was submitted on the construction of a new wharf. Two sites were examined, and estimates were given for the cost of a wharf on each site ; but owing to diversity of opinion among the parties interested as to the proper site, a decision was not arrived at until January, 1903.

On March 27, plans and specifications for the construction of a wharf on the eastern site, were submitted, and on January 12, 1904, a contract was entered into for the same for the sum of $7,720.

The work under contract consisted in the constructtion of a block and span wharf, extending into 11 feet at low water, together with a road, 223 feet in length, to connect it with the public road. The wharf to be 254 feet in length and 20 feet wide on top, with an 'L' on the northeastern side of the outer end, 28 feet long and 24 feet wide, and consisting of a shore abutment, 50 feet long, of 4 blocks 20 feet long, and of an outer block 24 by 48 feet, with openings or spans between them 18 feet in length. The abutment and the blocks to be constructed of round timber, with creosoted timber substructure, fully ballasted, fendered, and the faces of the two outer blocks, protected with close-sheathing.

At the close of the fiscal year 1903-04, the work of construction had just been started ; but there was not work enough done to give the contractor an estimate.

The wharf and approach thereto were since completed in a satisfactory manner on October 8, 1904. The expenditure, in calling for tenders, &c., was $154.47.

BOULARDERIE CENTRE.

Boularderie Centre, Victoria county, is on the southern side of the Great Bras d'Or channel, about eight miles to the westward of its entrance into the Atlantic ocean, and ten miles to the eastward of its entrance into the little Bras d'Or lake.

On April 25, 1901, a contract was entered into for the construction of a wharf which was completed on June 30, 1902.

The wharf is 164 feet in length and 20 feet wide, with an 'L' at the outer end, 20 by 20 feet, and consists of an approach of stone, clay and gravel ; 10 feet long, of a cribwork abutment 30 feet long ; of two cribwork blocks 20 by 20 feet, and of an outer block 24 by 40 feet, with 20 feet openings between the blocks, spanned and covered. The abutment and the blocks, constructed of round timber, are creosoted up to the level of high water, fully ballasted and fendered, and the two outer blocks are protected by close-sheathing.

The depth at low water along the channel face is 13 feet. Spring tides rise 2 feet.

During the year 1902-03, the sum of $130.12 was expended in opening a temporary road 2,100 feet in length, from the wharf to the public road. During the fiscal year ended June 30, 1904, the road was completed at a cost of $669.98.

Total expenditure to June 30, 1904, is $5,760.56.

BRETON COVE.

Breton Cove, Victoria county, is situated on the north-eastern shore of the island of Cape Breton, about midway between St. Ann's harbour and Ingonish.

The sum of $4,600 was voted for expenditure during 1903-04, towards the construction of a wharf to serve the purposes of a boat landing, and to afford shelter to fishing boats.

Plans and specifications for the work proposed were prepared, but the contract for their construction was not entered into until July 18, 1904.

The work under contract is a continuous cribwork structure with creosoted timber substructure, extending to 4 feet at low water spring tides, 194 feet in length and 16 feet wide, on top, with an 'L' on the western side of the outer end, 24 by 20 feet, to top, and an inclined landing, built on creosoted timber piles, 6 feet wide and 46 feet long, off the inner face.

Spring tides rise here 4 feet.

The expenditure incurred in calling for tenders, &c., was $299.23.

CARIBOU ISLAND.

Caribou Island, Pictou county, is on the Northumberland Strait, five miles to the westward of the entrance to Pictou harbour.

Caribou harbour, sheltered by Caribou island and a smaller island to the seaward of it, is eight miles in length and one mile in average width. The principal entrance, between the two islands, has a depth of only 4 feet at extreme low water, and the flats between the mainland and the western extremity of Caribou island are dry at extreme low water, except in a few small channels. Spring tides rise 6 feet, neaps 4 feet.

A causeway of brush and stone, 1,330 feet in length and 18 feet in width, between the mainland and the western extremity of the island, commenced in 1890-91, was, after the completion of work undertaken in 1894-95, built up to the level of the ordinary high water over 560 feet of its length, and about 1½ feet below that level over the remaining 770 feet. In 1897 a breach was made through the work near its western extremity, where the bottom was scoured to a depth of about 4 feet at low water, and the top of the low portion, 560 to 1,300 feet from the west end, was distributed in some places. In 1900-01 and 1901-02 the breaches in the brush and stonework were filled in and the work raised to about the level of the ordinary high water.

In 1902-03 the sum of $650.06 was expended in continuing the raising of the brush and stonework which was brought up to an average of about 1½ feet above extreme high water.

During the fiscal year 1903-04 the sum of $1,552.07 was expended in raising the brush and stonework where settlement had taken place and in placing quarried stone on the seaward side.

The total expenditure to June 30, 1904, is $5,454.54.

CHEBOGUE HARBOUR.

Chebogue harbour, is situated about seven miles south of the town of Yarmouth near its mouth, and surrounded by Fox island, Veal island, Jacko island and Shortliff point, is a small but well sheltered anchorage and roadstead, which affords shelter to a considerable number of fishing vessels and other small crafts engaged in fish-

ing and general trade. The anchorage is partly protected from the south by Fox island, but its western portion, which is mostly dry at low water, and much used at or near high water by boats plying between Chebogue point and other ports, and by other craft, is guarded by a gravel bar or beach. This beach is some 800 feet long, about 20 feet wide from high water to high water and 4 to 5 feet above high water ordinary spring tides. To preserve the beach, and the anchorage north of it, the department in 1900-01, at a cost of $1,798.34 built 360 feet in length of beach protection work. The cribwork is 8½ feet high 8 feet wide on top, plumb on the beach or shoreward side, battering 1 in 4 on the back or harbour side, and substantially built of round-logs, well bolted, fendered, filled with ballast, and covered with 3-inch plank.

In 1901-02, the sum of $1,311.79 was expended in extending the beach protection work built the previous year. The extension is 243 feet long, 9½ feet in mean width, 8½ feet high, strongly built of round-log cribwork, well fendered, filled with ballast and covered with 3-inch plank. The whole work, which is doing excellent service in the protection of the roadstead is now 603 feet in total length.

In 1903-04, the department expended the sum of $67.77 in finishing, with plank covering and fenders, the outer 80 feet in length of the beach protection work built in 1900-02.

CHEGGOGIN.

Cheggogin, Yarmouth county is a small fishing and farming village with a population of a couple of hundred people, situated on the Bay of Fundy coast, about five miles north of Yarmouth. The little bay of the same name is one-third of a mile deep north and south, and about the same east and west, fully exposed to the south-west, but sheltered from every other quarter. It is dry at low tide, but at high water has a depth of from 12 to 14 feet.

Over half a century ago a breakwater was built by the proprietors of the marsh, in a position immediately west of the present work. It was totally destroyed about twenty years ago, not a vestige of it being now visible.

In the winter of 1895-6, the inhabitants aided by a grant of $45 from the municipal council, built a small breakwater 80 feet long 12½ feet wide, and from 6 to 11 feet high, on the south side of the stream's outlet. In 1899-1900, the sum of $596.12 was expended in lengthening the breakwater by the addition of a new block 60 feet long, 15 feet wide, and from 10 to 13 feet high. It is cheaply but substantially built of round-log cribwork of the usual type. In 1900-01, the breakwater was further extended a length of 51 feet at a cost of $692.21. The new block is 11 feet wide on top, with side batters of 1 in 12, and from 12 to 13 feet high. In addition to the examination, a piece of the shoreward end of the work was rebuilt, 30 feet long, 8 feet wide, and from 7 to 9 feet high, at a cost of $88.03.

In 1902-03, the sum of $76.58 was expended in raising the shore-end of the breakwater a height of from 2 to 3 feet, for the purpose of preventing the gravel and sand from washing over and filling up the mouth of the stream where the fishermen keep their boats.

In 1903-04 the sum of $188.67 was expended in the purchase and delivery of timber for the further extension of the breakwater.

Spring tides rise 16 feet, neaps 13 feet. Total expenditure to June 30, 1904, is $1,643.61.

CHETICAMP POINT.

Cheticamp Point, Inverness county, is the southern extremity of Cheticamp island, about one mile to the eastward of a beach of shingle closing the south end of Cheticamp harbour, which lies between the island and the mainland, and is entered from the north.

A contract was entered into on July 16, 1903, for the constructin of a wharf, extending to 5 feet at extreme low water, for the sum of $13,880.

The work according to contract is to be 370 feet in length and 20 feet in width, and to consist of 20 feet of stone embankment, 80 feet of stone abutment, and 270 feet of cribwork with creosoted substructure.

At the close of the year ended June 30, 1904, the approach (embankment and stone abutment) was completed with the exception of the cap-timbers.

The work under contract has since been completed September 23, 1904.

The expenditure during the fiscal year was $1,223.49.

CHEVERIE.

The village of Cheverie, Hants county, with a population of about 350, is situated on the right or east bank of the estuary of the river Avon, where it debouches into the Basin of Minas, some fifteen miles north of Windsor, the county town. It is a good farming district, but the principal trade of the place is the quarrying and shipment of gypsum to the United States.

The quantity, which varies according to the price ruling in the American market, ranges from 20,000 to 60,000 tons per annum. A wharf, about 100 feet long, was built here many years ago by the provincial government. In 1873-74, the Department of Public Works lengthened it 70 feet, at a cost of $2,338.88; this extension being of open round-log cribwork, like the old work. In 1882, a further extension of 182 feet was built at a cost of $5,000. This piece of work is of square timber, close-faced, 25 feet high and 25 feet wide on top, the same width as the former, and the sides batter 1 in 12. In 1885, the sum of $600 was expended in effecting some much-needed repairs to the shoreward side of the wharf. In 1884, the department built a detached breakwater 300 feet distant from the outer end of the wharf for the purpose of protecting the latter from the northerly seas, to which it was exposed. This piece of work consists of solid cribwork, 130 feet long, 20 feet wide on top, 35 feet wide at base and about 23 feet high, built of square timber and close-faced on all sides. The seaward side to the height of 10 feet below high water of spring tides has a slope of one to one, the sloping face being covered with 6-inch plank. The block is provided with mooring posts to assist vessels coming to berth at the wharf, as well as with ring-bolts and ladders.

In 1887-88, the sum of $500, and in 1896-97, the sum of $100, was expended in extensive repairs. On the outer 100 feet in length the flooring, guards, and some of the fenders were renewed; on the 80 feet the guards and 3 fenders were renewed; on the next 105 feet the work received new ties, stringers, guards, flooring and fenders; on the next 60 feet shorewards most of the flooring was renewd, 205 feet in length of the wharf included in the above lengths, was raised in height from 1 to 3 feet. In all, 69 new fenders were placed and 250 tons of new ballast was put in.

In the fiscal year ending June 30, 1902, the sum of $768.23 was expended in the purchase of timber for the extension of the detached breakwater built in 1884, as described above.

In 1902-03, the sum of $2,999.34 was expended in the construction of an extension to the detached breakwater. The new block is 100 feet long, 23 wide on top, 22 feet high, battering on the landward side 1 in 4, and plumb on the seaward face, with a break 5 feet high. It is substantially built of stone-filled cribwork and close-sheathed on the seaward side.

In 1903-4, the sum of $1,486.39 was expended in completing the work.

Spring tides rise 40 feet, neaps 36 feet.

CHURCH POINT.

Church Point, Digby county, is situated on the southeast side of St. Mary's Bay, 6 miles southwest from Weymouth. It has a population of 200 people, engaged in fishing and farming.

The works, which consist of a wharf, a retaining wall and breakwater, appear to have been built between the years 1856 and 1866, at the joint expense of the provincial government and the inhabitants, the expenditure of the government having been $1,055.66.

In 1875-6, the department expended the sum of $2,000, the inhabitants contributing an equal amount, in repairing the northern face and in building an L, 72 feet long by 20 feet wide at right angles to it, with the object of preventing gravel from working around the outer end. The movement of gravel, which is from south to north, has been always more or less a difficulty and detriment to this port. In 1890-91, the gravel having worked around the outer end of the breakwater and formed a bar across the entrance to the loading berth, projecting at right angles from the outer or northwest corner of the breakwater. The groyne was extended in 1894-95 a further distance of 30 feet, and in 1896-97, it was again extended by a length of 120 feet and width of 16 to 25 feet by a height of 10 to 22 feet, all of round-log cribwork. The sluice gates at the head of the lock, where the fresh stream makes its exit, were rebuilt in order to cause the stream to scour away the gravel from alongside the wharf.

In 1900-01, the sum of $800 was expended in rebuilding 63 feet in length of the wharf front, 16 feet high and from 10 to 20 feet wide, 35 feet of this length being close-piled. The sluice-way was entirely rebuilt and fitted with double lifting gates instead of single; the floor of the sluice was lowered 5 feet, and an apron extending 13 feet up-stream and 50 feet down-stream, was constructed of 3-inch plank, well spiked to heavy stringers, bedded in close-packed stone, and close-piled at both ends to prevent scour.

In 1902-03 the sum of $1,800 was expended in rebuilding 134 feet in length of the wharf wall. The new piece is 15 feet wide at bottom, 18 feet wide at top and 20 feet high, solidly built of stone-filled cribwork.

In 1903-04, the sum of $2,995.21 was expended in the further reconstruction of the wharf wall begun in 1902-03. The length of the work built this year is 158 feet, its height from 19 to 21 feet and its width from 8 to 13 feet.

The total expenditure to June 30, 1904, is $15,353.02, including a refund of $1,692 to the provincial government in 1887-88. This work was transferred to the control of the Marine and Fisheries in June, 1888.

Spring tides rise about 22 feet.

COW BAY.

Cow Bay, Halifax county, is situated at the mouth of Halifax harbour on the Atlantic coast, about two miles east of Devil island. It is a broad bay formed by a narrow strip of beach, about a mile in length, separating the Atlantic from a fresh water lake having an area of about one and a quarter square miles. The outlet of the lake, which is a small brook flowing through the beach, is used by the fishermen of the locality for the purpose of taking their boats into the lake for shelter in stormy weather. The action of the seas have, however, many times caused the outlet to fill up with gravel, flooding the shores of the lake and making access thereto impracticable. A heavy freshet in the early spring of 1902 swept the gravel out of the outlet and enlarged it to greater dimensions than it hitherto had. To maintain the usefulness of this outlet, the department during the fiscal year of 1903-04 expended the sum of $2,063.94 in the purchase and delivery of timber for the purpose of constructing a substantial breakwater.

COW BAY (PORT MORIEN).

Cow Bay (Port Morien), Cape Breton county, is on the eastern coast of Cape Breton island, about eighteen miles to the eastward of the entrance to Sydney harbour.

A breakwater, built by the owners of the Gowrie Coal Mine on the north side of the bay, came under the charge of the department in 1873. It originally extended 1,374 feet to 17 feet at low, or to 23 feet at high water, and was about 44 feet in width. The area of the basin inclosed between it and the shipping pier of the Gowrie mines, now the property of the Dominion Coal Company, was 17 acres, 10 acres of which had a depth of from 9 to 17 feet at low water.

The breakwater was seriously damaged during the great gale of August 24, 1873. Extensive repairs and improvements were made nearly every year up to 1895 when the breakwater consisted of 220 feet of old work protected on the seaward side by a beach of shingle and boulders, 360 feet of old work 44 feet in width, with a new inner face work and a break on the seaward side built over the remains of the old work ; and 793 feet of inner work with counterforts connecting outer face works. The inner and outer face works were from 30 to 20 feet apart ; they were connected by tie-walls and the spaces were filled with earth and stone ballast.

In 1895 and 1896, 260 feet of breakwater (1,114 feet from the shore end outward) was carried away down to from 2 to 6½ feet below low water; the outer face-work from 1,114 feet from the shore end inward were badly damaged, and ballast was washed over the works and deposited in the dock along the inner face from 581 feet to 1,114 feet from the shore end.

Between the years 1897 and 1901 a large amount was expended in repairing and strengthening the breakwater from 1,114 feet from the shore end inward. The outer works were repaired and strengthened by filling in the face chambers to about half tide level with concrete and by close-piling ; the stringers and covering of the inner work from 581 feet to 1,114 feet from the shore end were renewed, and the work of placing a talus of concrete blocks on the seaward side was commenced.

During the year 1902-03 the sum of $10,005 was expended in repairing and strengthening the breakwater, the new work including the reconstruction of 87 feet of outer face work 24 feet in width and 15 feet in average height, of which the outer face chambers were filled with concrete and the outer face close-piled ; and in the reconstruction, to within one foot four inches of the top, of part of outer end, 49 feet in length, 24 feet in width and 15½ feet in average height, which remained to be completed and to have the outer face chambers filled with concrete and the outer faces close piled.

During the fiscal year 1903-04, the sum of $21,266.79, was expended in continuing the work of repairing and strengthening the breakwater in progress in 1902-03. The work performed included : the completion of the block 49 x 24 feet at the outer end of outer face works and its extension to form a block 49 feet square of which the outer face chambers are filled with concrete and the outer faces close-piled ; in constructing 218 feet of new face work, 9 feet wide and 11 feet in height, inside of the old outer face work 226 to 444 feet from the inner end, and in filling it with concrete over 109 feet from its outer end inwards ; in reconstructing, filling face chambers with concrete and close-piling 112 feet of outer face work from the inner counterfort (600 feet from the inner end) outwards ; and in levelling up and covering with concrete, the space between the inner and outer works from 600 feet from the inner end outwards.

The total expenditure to June 30, 1904, including $25,000 for purchase of breakwater, amounted to $252,877.28.

D'ESCOUSSE.

D'Escousse, Richmond county, is a thickly settled district on the northeastern coast of Madame island, and on the southern side of the entrance into Lennox Pas-

sage, a strait separating the Island of Madame from Cape Breton island, and connecting St. Peter's bay with the Strait of Canso.

The harbour is formed by outlying islands and connecting beaches, the entrance is from the eastward, through a narrow channel, obstructed by a 'bar' with 10 feet at low water. It is about three-quarters of a mile in length and one-third in width, with a depth of about 21 feet at low water spring tides which rise 6 feet.

On March 23, 1903, a contract was entered into, in the sum of $4,388, for the construction of a public wharf and warehouse. The work of construction was commenced on July 27, and was brought to a satisfactory completion on November 21, 1903.

The wharf is a pile structure, with creosoted timber bearing piles beyond the line of low water, and extends to 12 feet at low water ; it is 307 feet in length and 22 feet wide, with an L on the western side of the outer end 22 x 22 feet. The warehouse is constructed on a pile foundation, on the eastern side of the inner end of the wharf and is 30 feet long x 20 feet wide, with 10 foot posts. The sides and roof are boarded, shingled and painted. The floor is laid double, the building has four windows, and a large sliding door.

DEVIL ISLAND.

Devil Island, Halifax county, is a small low island about 2,000 feet in length by 1,000 wide, with its highest point about 15 feet above high water springs, situated about eight miles to the south-east of the city of Halifax, and one-third of a mile from the mainland off Hartland Point, to which it is connected by a reef, covered with three feet of sand, and having three feet of water over it at low tide. The island is permanently inhabited by about one hundred people, wholly dependent upon fishing for their livelihood.

In 1892, a breakwater 300 feet in length, 15 feet in width, with an L at the outer end, 30 feet in length, at which there is a depth of 5 feet at low water spring tides, was constructed at a cost of $1,941.18.

In September, 1893, the sum of $87.96 was expended in close-sheathing 100 feet in length of the western or seaward face of the breakwater, in order to prevent the sea from washing the gravel under the ballast floor and obstructing the berths for boats on the eastern side. The sheathing is of round spars, flatted on three sides, to a thickness of 6 to 8 inches, and well secured to the longitudinal face timbers with iron bolts, three quarters of an inch in diameter.

In 1899-1900, the sum of $97.13 was expended in petty repairs, rendered necessary by damage done by a severe storm March, 1, 1900. The work done comprised 300 feet b.m. of new planking, about a dozen new fenders, a short piece of new guard timber and thirty tons of ballast.

In 1903-04, the sum of $252.55, was expended in repairs and improvements. Of this sum $149.68 was expended in filling the spaces between the face-logs with new pieces of timber, rendered necessary by the eating away of the old timbers by the limnoria. The outer end was also reballasted. The remaining $100 was expended in building a small wing or break on the western side of the shore end of the breakwater to prevent the gravel from washing in past the shore end of the work; the new block is 35 feet long, 10 feet wide and 7 feet high, well and strongly built of round-log cribwork filled with stone.

Spring tides rise 6 feet, neaps 5 feet.

DIGBY.

Digby, the shire town of the county of Digby, with a population of about 1,500, is beautifully situated on the south-western end of Annapolis basin. It is an important station on the Dominion Atlantic Railway, sixty-seven miles north of Yarmouth,

one hundred and fifty miles from Halifax, twenty miles from Annapolis, and is also the port of call for the daily steamer of the Dominion Atlantic Railway, plying between Digby and St. John. The harbour is open at all seasons, and well protected from nearly all quarters; storms, however, from the north and north-east drive a heavy sea against the pier, and if at such times there be much drift ice in the basin, the structure is likely to suffer damage.

The first pier was built by the government of Nova Scotia some years before confederation, and was nearly destroyed by the gales which swept the Bay of Fundy in 1866-7. In 1869 to aid in rebuilding the work, the sum of $2,920 was granted by parliament and transferred to be expended by the provincial government. The pier, as then built, was of pile-work 12 feet apart for 550 feet, next a block of cribwork 80 feet long, 45 feet wide, the southern half of it sloped so as to form an incline rendered necessary by the great rise and fall of the tide (26 feet at spring). The incline was finished by a block 170 feet long by 22 feet wide, the northern half of this portion of the pier being all pile-bents, 8 feet apart. The outer end of the pier consisted of a block 56 feet long, 45 feet wide and about 40 feet high. The whole of the northern face was close-piled, the total length of the structure being 870 feet.

In 1872, the sum of $1,650 was expended by the department in completing and repairing the pier. In 1874 a number of piles and braces were renewed, the outer block newly fendered, and new joists and plankings laid for the whole length at a cost of $2,500. During the gale of February 22, 1879, a schooner loaded with produce for the West Indies, parted her cable and was swept bodily through the pier, carrying away a length of 130 feet, which was rebuilt at a cost of $2,367.73.

In 1881-2, the sum of $888.57 was expended in repairing a few piles and other timbers that had been eaten away by the limnoria.

In December, 1885, the outer end of the pier was destroyed by a severe gale, and in 1885-6, the sum of $1,945.62 was expended in repairs.

In 1886-7, a further sum of $767.62 was spent on the same repairs.

In 1887-8, the sum of $7,467.68 was expended on the construction of a block, 40 x 40 feet, on the site of the displaced outer block ; of an inclined landing 26 feet wide and 8 feet long between the new outer block and the undestroyed inner portion of the pier and the building of a roadway on pile and frame bents, connecting the whole work with the new outer block. In January, 1888, operations were begun towards building the pier to its original length, and the departmental report for the year 1888-9 shows an expenditure of $4,498.14. The same work consisted of a new block 45 feet by 45 feet to replace the former one. It is built of round timber with double sets of face-logs, and is fully ballasted; it is 45 feet high, and connected with the older portions of the work by a cribwork inclined landing, over the top of which a deck wharf is carried on heavy framed bents. The inclined landing and its superstructure is 25 feet wide. The in-shore or pile-work section was strengthened and repaired in places, and parts of the worn and decayed planking were renewed. In 1889-90, heavy piles were driven along the northern and southern sides of the centre block, which was shifted and damaged by a storm in December, 1885, to prevent any further movement.

In 1890-1, and again in 1891-2, small expenditures were made in general repairs.

In 1890, a contract was entered into for the construction of a landing pier, on a new site, viz.: on the north side of the 'Racquet,' about a mile to the northward of the present pier, and the town of Digby. For this purpose a quantity of timber and iron had been procured by the contractor. Owing, however, to numerous delays, and the death of the contractor, the intention of building this new pier was abandoned, and it was decided instead to repair and reconstruct the present pier, utilizing, as much as possible, the timber and iron belonging to the estate of the deceased contractor. The work of reconstruction was carried out by days' labour at a cost of $15,248.15.

In April, 1894, a length of 330 feet of close-piling along the north side of the pier, together with the caps and walings for the same distance, and about ninety of the outside bearing and fender piles, were destroyed by a violent gale. In order to save the balance of the structure from the scouring action of the under-tow, set up by the sheet piling, the rest of it was immediately cut out, and the sheet piling and other timber that had been knocked adrift was saved, and piled up on the inner wharf. Subsequently in May and June, 1894, the sum of $1,410.03 was expended in making good the damage done by the April storm. The sheet piling having proved a mistake, it was not replaced, but about ninety new heavy piles driven and thoroughly braced and bolted.

In 1895-6, the sum of $4,341.99 was applied in filling with substantial close-piled trestle work, a space or recess on the north side of the pier, near its outer end, 210 feet long by an average width of 17 feet, and in raising from 2 to 3 feet, and renewing the entire floor of the outer 225 feet in length.

In 1896-7 the sum of $3,132.89 was applied to the reconstruction of the southern half of the shore end of the pier for a length of 450 feet, in substantial pile-work. The new work was covered with 6-inch plank, and securely capped, fendered and braced. In the year 1898-9 the sum of $579.80 was expended in the renewal and repair of the outer south corner of the pier, which was damaged by being struck by the Dominion Atlantic steamship 'Prince Rupert' during the southeast blow in April, 1899. In addition to this, 40 feet in length of the inclined slip was replanked with 6-inch plank and a couple of new fenders were bolted into position.

In 1900-1, the sum of $2,000 was expended in necessary renewals. The work done consisted in replanking the wide part of the inclined slip, 125 feet long by 25 feet wide. the narrow part 87 feet long by 17 feet wide, and a portion of the floor of the main wharf 18 by 22 feet, with six-inch spruce deals.

In addition to this, an open shed, 100 feet long by 33 feet 6 inches wide, was erected at the outer end of the present shed and office and over the inclined slip, to protect freight when landed from steamers.

The importance of this pier may be judged by the fact that the collection for wharfage dues now amount to nearly $3,000 per annum.

In 1901-02, the sum of $3,300 was expended in repairs and improvements. The old freight shed was moved 100 feet up the pier and raised 4 feet in height. Adjoining it outwardly there was built a new shed 202 feet long, the upper 100 feet in length being built with the floor on a level with a boxcar, and the lower 102 feet level with the floor of the pier. A portion of the pier floor was also renewed. The arrangement is now most satisfactory and convenient for the handling of freight.

In 1902-03, the sum of $3,697.77 was expended in rebuilding the lower 60 feet in length of the inclined slip. Owing to this portion of the work, which was of crib-work, being very much injured by the limnoria, the new portion was built of pilework, the piles being driven through the ballast cribs. It was difficult and expensive work. In addition to this, a considerable portion of 6-inch plank on the shoreward end of the pier was renewed, and a number of the long hardwood fenders that had been broken by the daily steamer from St. John, were renewed.

In 1903-04, the sum of $313.15 was expended in renewing the hardwood fenders, building a stairway from the main dock to the inclined slip, and putting new eaves, gutters, down spouts and a few other petty miscellaneous repairs to the freight sheds.

The total expenditure to June 30, 1903, is $79,586.34, including a refund of $11,623, to the provincial government in 1887-88, and not including an expenditure of $4,192.02 in dredging.

Spring tides rise 24 feet, neaps about 20 feet.

This work was transferred to the control of the Department of Marine and Fisheries on June 12, 1888.

DONALD'S HEAD.

Donald's Head, Shelburne county, is practically a small high tide island, separated from the mainland by a beach one mile in length and from 1,500 to 2,000 feet in width. It is situated about three miles south-west of Stony island and is a very important fishing station on Cape Sable island. The fishing industry at this place consists of twenty-five large boats, seven to ten single-handed boats, twenty-five fish houses, one lobster factory and one boneless-fish establishment.

The island is protected by a cobble stone beach running along its seaward side and by a breakwater situated at its north-west end, which in turn protects a small cove or harbour on the inside of the island, as well as a small creek with several small landings constructed therein.

The breakwater consists of two parts : one, the shore end, 170 feet in length, built by the provincial government at or near the time of confederation, and the other, 90 feet in length, constructed by this department in the fiscal year 1891-92, at a cost of $2,099.04, and separated from the provincial government work by a gap of 12 feet. The portion of the work built by this department is 18 feet wide, and from 15 to 18 feet high throughout, being built of continuous round-log, stone-filled cribwork, well fastened and fendered.

In the spring of 1899, a breach was made in the beach and three fish houses and two landings were destroyed. Since then, the beach has gradually worn and washed away until the island became almost divided and the destruction of the entire fishing station seemed inevitable.

To effect the necessary repairs to the breakwater and to adequately protect the beach, cove, &c., the sum of $2,218.54 was expended during the fiscal year 1903-04.

The work performed consisted in filling up the gap in the breakwater, 12 feet long, 18 feet wide and 15 feet deep ; renewing the top of the old work, 170 feet in length, 18 feet wide, and 6 feet in height; and constructing three pieces of beach protection, one 120 feet in length, 8 feet wide on top, and 5 feet in height, another 370 feet long, 8 feet wide on top and with an average height of 8 feet, and the third 242 feet in length, 8 feet wide on top and average height of 4½ feet. The cribwork is of round logs, ballasted to the top with good sized stones, well fendered and fastened. Spring tides rise 10 feet and neap 7 feet.

DRUM HEAD.

Drum Head, Guysborough county, is on the south or Atlantic coast of Nova Scotia, about 2 miles southeast of the entrance to Isaac's Harbour. A shoal extending in a westerly direction from the 'head' affords partial shelter to a small boat harbour.

A contract was entered into on November 13, 1902, for the construction of a breakwater to extend 350 feet from Drum Head in from 1½ to 2 feet at low water, for the sum of $4,685 ; the work to consist of cribwork 16 feet in width on top, fully ballasted, close-fendered on the seaward side and protected on the seaward side and at the outer end by a talus of stone sloping 3 to 1 from high water. Spring tides rise 5 feet.

At the close of the year ended June 30, 1903, 151 feet of cribwork was in place, of which the inner 80 feet was nearly up to required height, and the outer 71 feet to an average height of 4½ feet above low water.

During the fiscal year 1903-04, the work under contract was completed, the amount expended during the year was $4,620.

EAST BAY.

East Bay, Cape Breton county, is at the head of East Bay, an arm of the Great Bras d'Or Lake.

The original wharf at this place was built by the residents, aided by the provincial government; it was a block and span structure 15 feet wide, with a T head 70 feet in length and 18 feet wide. In 1882-83, a block of cribwork 71 feet 6 inches by 22 feet was added at the outer end by the federal government. In 1888-89 and 1891-92 the blocks of the approach were reconstructed and during the latter year the blocks of the original 'T' head were removed and the face and ends of the block built in 1882-83 were close-piled. In 1898-99 the covering, guard rails, floor-stringers and upper longitudinal timbers of the head (71 feet 6 inches by 22 feet) and the covering and floor-stringers of 35 feet of the approach were removed.

The depth along the outer face of the head at ordinary lake level is 11 feet.

In 1901-02, the covering and floor-stringers of the inner 45 feet of the approach were renewed and the roadway leading along the shore to the wharf was repaired.

During the fiscal year 1903-04, the sum of $263.73 was expended in reconstructing part of the approach to the 'head.' The top was reconstructed, three new blocks were placed between the old ones, which had been destroyed by the teredo.

EAST BERLIN.

East Berlin, Queen's county, is a small fishing and farming settlement, about 11 miles northeast of Liverpool, and has a population of about 300. During the fiscal year 1902-03, the sum of $1,999.96 was expended upon the construction of a breakwater 330 feet long, 10 feet wide and 9 feet high, at a point near the centre of a shingle beach 700 feet long, protecting the harbour of East Berlin, which is bare at about half tide. The work consists of continuous, round-log, stone-filled cribwork, well-fendered and ballasted.

During the fiscal year 1903-04, the breakwater was completed by the construction of a further length of 310 feet, at a cost of $692.93.

Spring tides rise 6½ feet, neap tides 5 feet.

EAST JEDDORE.

East Jeddore, Halifax county, is a settlement of about six hundred people, scattered along the eastern side of Jeddore Harbour, about thirty miles east of Halifax, and ten miles west of Ship Harbour. The inhabitants engage chiefly in fishing, the fleet comprising ten schooners and a number of small boats. The harbour is an excellent one with good shelter and easy of approach, the channel being from 20 to 40 feet deep and from 800 to 1,000 feet wide. Hitherto there has been no loading or landing pier in the harbour, and goods shipped by or landed from schooners have had to be transferred to and from the vessels in boats.

In the fiscal year ending June 30, 1904, the department expended the sum of $1,452.78 (vote $1,800) in constructing a pile-wharf, 100 feet long, 25 feet wide and with an L on the outer end giving a face length of 40 feet. The height of the work along the outer face is 20 feet, giving a depth of water at low water ordinary spring tides of about 10 feet.

Spring tides rise 6 feet, neaps 5 feet.

ECONOMY.

Economy, Colchester county, is situated on the north side of the Basin of Minas, seventeen miles west of Great Village and twenty-one east of Parrsboro.

A wharf was built here by the department in 1887-88, 208 feet long, and 25 feet wide, at a cost of $2,500. In the summer of 1890, an extension was built 100 feet long and 25 feet wide with an L 25 feet long on the outer end, at a cost of $2,500. In the summer of 1891, an extension was built 100 feet long of the same width as the rest of the work, at a cost of $2,200. In the autumn of 1891, a third extension was built 55

feet in length at a cost of $1,000. The whole structure was substantially built of round-log cribwork, well ballasted and double fendered. Its average height is about 18 feet and at the outer end, at high water ordinary spring tides, there is about 16 feet of water.

In 1895-96, the sum of $159.45 was expended in laying new plank flooring for 190 feet in length of the shoreward portion, and putting in some new fenders on the outer block.

Spring tides rise 46 feet, neaps 39 feet.

Owing to the mud-flats in the cove, where the present wharf was built, gradually filling up with mud, this wharf has become almost useless owing to the reduced depth of water to be found at it, and in 1903-04 the sum of $2,079.11 was expended in building a new pile-wharf at the mouth of the little creek or brook about one-quarter mile east of the old wharf. The new structure is of pile-work; it is 200 feet long, 25 feet wide, with an L on the outer end giving a face length of 45 feet and depth of water at high water ordinary spring tides of 16 feet.

Spring tides rise 48 feet, neaps 42 feet.

FINLAY POINT.

Finlay Point, Inverness county, is on the west coast of Cape Breton island, three miles north of the entrance to Mabou Harbour.

In 1902-3, the sum of $529.78 was expended in procuring all the timber, with the exception of floor-stringers, covering and guard rails, and nearly all the iron required for the construction of a proposed wharf.

During the fiscal year 1903-4, the sum of $1,466.22 was expended in procuring the balance of materials required and in nearly completing a wharf of crib-work 15 feet in width, on top, extending from low water 146 feet to 3 feet at low water, with an approach of brush and stone 170 feet long. At the end of the year the cribwork was complete, with the exception of the fenders, covering and guard rails over a length of 82 feet from the inner end, the brush and stonework was approaching completion. Spring tides rise 4 feet.

FIVE ISLANDS.

The village of Five Islands is situated on the north shore of the Basin of Minas, at the extreme western end of Colchester county, 15 miles east of Parrsboro'. The settlement is some three miles long, and includes that portion of the shore of the basin between East river and Harrington's river, the latter forming the boundary line between Colchester and Cumberland counties. The total population is from 300 to 400 and the exports consist of deals, lumber, cordwood, potatoes and fish. Formerly there was a considerable export trade in barytes, but owing to the low price of this article in the American market, the mines have been closed for the last 15 or 16 years. From 20 to 30 coasting schooners load here annually.

In the year 1884, the department built a public wharf at a cost of $2,500, at the upper or east end of the settlement, in the mouth of the East river. It is 75 feet long, 40 feet wide and 28 feet high at the outer end, where at high water ordinary spring tides, there is 25 feet of water. The work is of the ordinary type of round-log, stone-filled, cribwork. The sides batter 1 in 12 are double-fendered.

In 1893-94, the sum of $370.38 was expended in renewing the floor, including stringers and guard timbers, the raising of the outer end about 2 feet and the construction of an inclined ramp in the end of the wharf for the purpose of loading deals on to the decks of schooners lying dry at low water.

In 1903-04, the sum of $699.97 was expended in renewing the whole top of the wharf, including planking, guards, stringers and fenders. The approach was also re-gravelled.

Spring tides rise 48 feet, neaps 40 feet.

FORT LAWRENCE.

Fort Lawrence, Cumberland county, is situated on the mouth of the La Planche river, and was formerly the proposed terminal of the Chignecto Ship Railway. It is about 3 miles west of the town of Amherst, and is the nearest approach to navigable waters for that town. On June 2, 1903, a contract was let to Messrs. Lyons & White, of Ottawa, for the construction of a wharf at this place, for the sum of $14,895.

The structure will consist of a section of pile trestle work 300 feet long, 50 feet wide and 43 feet high, along the outer face, to be built parallel to the bank of the river, with an approach, also of pile work, of an average length of 210 feet, 36 feet wide, and of an average height of 26 feet. The available depth along the outer face will be 37 feet at high water ordinary spring tides.

Spring tides rise 45 feet, neaps 33 feet.

At the end of the fiscal year 1903-04, about 120 feet in length of the work had been constructed. The amount expended was $3,769.25.

FRIAR'S HEAD.

Friar's Head, Inverness county, is on the west coast of Cape Breton Island, 6 miles to the northward of the entrance to Margaree Harbour.

In 1900-01, the sum of $494.50 was expended in procuring part of the materials required for the construction of a breakwater, designed to close an opening in a ledge of rock lying parallel to the shore, at a fishing station near Friar's Head, with a view to affording partial shelter to a small wharf and the anchorage for boats. The work proposed included a concrete wall 90 feet in length, 4 feet in width on top, and 8 feet in height, from 1 foot above low water, with a talus of large stone on the seaward side, sloping 2 to 1 from the top of the wall. In 1901-02, the sum of $1,097.81 was expended in constructing about three-fifths of the concrete wall and one-half the talus, and in procuring part of the cement required to complete the work.

In 1902-03, the sum of $629.96 was expended in completing the work with the exception of 3 cubic yards of concrete in the west end of the wall, and the talus. The stone obtainable for the talus was too light to withstand the sea. Those placed in 1901-02 were carried away.

During the fiscal year 1903-04, the sum of $578.96 was expended in extending the concrete wall 13 feet at its west end, and in constructing a wall of concrete 4 feet in height and 4 feet in width on its seaward side, to prevent undermining.

Total expenditure to June 30, 1904, is $2,801.25.

FRUID'S POINT.

Fruid's Point, Shelbourne county, is situated on the west side and near the head of Ragged Island bay, about three and a half miles northeast of Lockeport. From Lockeport to Sable river, a distance of about 10 miles, there is a continuous settlement almost without wharf facilities, and to accommodate these people a wharf was constructed here during the fiscal year 1903-4 at a cost of $4,425.20. It will be much used in the shipment of logs, lumber, farm produce and by the many fishermen of the locality.

It consists of two parts, an approach of stone 105 feet in length, 24 feet wide on top and 8 feet high at its outer end, and an alternate block and span wharf 120 feet in length 20 feet wide, with a height of 18 feet at its outer end. There are 3 spans each 18 feet in the clear, and 3 cribwork blocks each 22 feet in length. The cribs are constructed of round-logs well ballasted and fendered, the floor of the wharf is 4 feet above high water ordinary spring tides.

Spring tides rise here 7½ feet and neap 5 feet.

GABARUS.

Gabarus bay, on the Atlantic coast of Cape Breton island, is 5 miles wide at the entrance between White Point and Cape Gabarus, and extends inland 5 miles.

On September 5, 1900, a contract was entered into for the construction of a breakwater at Harbour Point, near the head of the bay. The work under contract was commenced in July, 1901, and completed in January, 1902. The breakwater is 190 feet in length, including an inner section, 70 feet in length and 16 feet in width on top, of round timber laid open-faced and close-fendered on the seaward side ; and an outer section 120 feet in length and 24 feet in width, on top of squared timber, close-faced and close-fendered on the seaward side, at the outer end, and on the inner side for a distance of 15 feet. The substructure is of creosoted and the superstructure of native timber. The top of the covering is 5 feet above extreme high water, and the depth at extreme low water at the inner and outer ends of the outer section are respectively, 1 foot and 12½ feet. Spring tides rise 5 feet.

Expenditure in 1901-02 was $8,259.50.

The sum of $6,000 was appropriated for expenditure in 1903-4 in extending the work, but no action was taken; it having been found that an additional amount would be required for a proposed extension 125 feet in length.

GEORGEVILLE.

Georgeville, Antigonish county, is on the southern shore of Northumberland strait, 6½ miles southwest from Cape George.

A wharf was constructed here in 1892-3 to afford the inhabitants shipping and landing facilities. It was 207 feet in length and 20 feet wide, with an L 20 feet by 20 feet, on the eastern side of the outer end ; but during 1886-7-8, an extension, 44 feet in length, 40 feet in width, with an 'L' 20 by 24 feet, was added thereto, making a total length of 251 feet, 20 feet wide for a distance of 187 feet, 40 feet wide for a distance of 40 feet, and 60 feet wide for the remaining distance of 24 feet. The inner end of the wharf, for a distance of 87 feet was of stone covered with plank, and the remainder of the work, of square timber cribwork, protected by sheathing and fenders. The depth of water at the outer end, at low water, is 7 feet.

During the severe south-west gales of September 12, 1900, which caused so much damage in the Gulf of St. Lawrence, the woodwork on the stone approach was partly lifted by the sea and removed several feet. The sum of $291.25 was expended in putting it back into position, but it was shortly after, again disturbed by the sea during a heavy gale.

During 1901-2, the sum of $699.47 was expended in removing and taking apart the woodwork on the top of the stone approach ; the stone wall was taken down to a depth of 4 feet, and in its place cribwork was substituted, fully ballasted and covered with the old plank, and the outer faces of both cribwork and stone wall, were close-sheathed.

The sum of $2,500 was voted for expenditure during 1903-04, towards the extension of the wharf, 50 feet in length and 25 feet wide, with an 'L' 40 by 25 feet on the western side of the outer end.

A plan and specification for the work was prepared, the necessary materials were procured during the winter and spring, and all was ready to commence construction at the end of the fiscal year.

Out of the amount voted, the sum of $2,499.70 was expended during the year.

Spring tides rise 4½ feet.

The total expenditure on the work up to June 30, 1904, was $14,320.15.

GRAND ETANG.

Grand Etang, Inverness county, is situated on the Gulf of St. Lawrence, about midway between the harbours of Margaree and Cheticamp.

The opening of a channel through a beach which separated the waters of the gulf from a large and deep fresh water pond, and the construction of a channel protection work to make the pond available for use and shelter of fishing boats and small vessels, necessitated the diversion of the highway across the pond, 500 feet above the former crossing.

The bridge is 563 feet in length, including the east and west approaches of brush and stone, with cribwork abutments, respectively 94 and 51 feet in length, and 438 feet of pile work. It is provided with a hand rail on each side, and the boat channel through the above is spanned by a drawbridge. The depth at extreme low water over the central 200 feet of the length of the work is about 6 feet, and to firm bottom, through water and soft mud, from 21 to 24 feet. The piles having been weakened by the ravages, of the teredo, temporary repairs were made in 1898-99 and 1899-1900. In 1901-2 the sum of $2,799.35 was expended in temporary repairs and in procuring all the creosoted piling and part of the native timber required for its reconstruction.

During the year 1902-3, the sum of $1,020 was laid out in temporary repairs to the old bridge; in procuring the balance of the native timber required; and in constructing a new bridge parallel to and distant 9 feet from the south or inner side of the old bridge.

The appropriation for 1903-4 was made to cover an over-expenditure of $1,279.78 incurred in 1902-3 in completing the new bridge.

Expenditure during fiscal year 1903-4, $2,279.78. The total expenditure in connection with works at Grand Etang to June 30, 1904 was :—

On channel and protection works	$23,870 64
On bridge construction, 1895-6	3,690 20
On repairs to bridge and on construction of new bridge	5,385 08
	$32,945 92

GRAND NARROWS.

Grand Narrows, Cape Breton county, is on the south-eastern side of Barra strait, which connects the Great with the Little Bras d'Or lake. It is an important station on the Intercolonial Railway at the southern end of the railway bridge which spans the strait at this place, and is also a landing place for steamers, which call twice a day with mails and passengers for and from Baddeck, and make connection with the express trains east and west.

The old wharf was 287 feet in length, including 67 feet of cribwork filled with brush and stone and covered with gravel; 80 feet of pile-work built in 1885-86 by the department over the remains of an old landing pier built by the provincial government; and an extension, 140 feet in length built by the department in 1883-84. The extension consisted of three blocks, each 20 by 20 feet, and an outer block or head, 20 feet long and 60 feet wide, with 15 feet openings or spans between each block.

Repairs were made upon the structure from time to time, but owing to natural decay the ravages of the teredo, it fell eventually into a dangerous condition, it was decided to reconstruct it with creosoted timber piling.

During 1902-3, the sum of $1,300.66 was expended in reconstructing the work with pile-work, to the end of the old work and 10 feet beyond ; the work being 297 feet in length, 24 feet wide for a distance of 277 feet and 30 feet wide for the remaining distance of 20 feet; and having a depth, at low water of 11 feet at the outer end.

In order to render the wharf accessible to steamers of a greater draught, the sum of $3,500 was voted for expenditure during 1903-4, towards the extension of the wharf to 15 feet at low water, a distance of 57½ feet on the centre line, and the construction of an 'L' 30 by 30 feet, on the southern side of the outer end.

Plans and specification for the proposed pile-work were prepared and all necessary materials were obtained, but as the creosoted timber required was not delivered until

the latter part of June, construction could not be commenced by the end of the fiscal year, and out of the amount voted, the sum of $2,478.79 only, was expended.

The total expenditure on this work, up to June 30, 1904, including a refund of $1,289.70 paid to the provincial government, is $11,164.75.

GRAND RIVER.

Grand River, Richmond county, is a small tidal stream rising in Loch Lomond and emptying into the Atlantic ocean, six miles to the eastward of the entrance of St. Peter's bay. The entrance is obstructed by a bar of sand, over which there is a depth of about 3 feet at extreme low water, and rendered dangerous by several large rocks. Inside, the channel carries 6 feet at extreme low water to within half a mile of a bridge crossing the river three miles inland.

During the fiscal year 1903-04, the sum of $648.41 was expended out of the appropriation of $1,000 in improving the entrance. The work was not completed at the end of the fiscal year, but was continued until completion by the removal of a large rock or point of reef on the west side.

GRANVILLE CENTRE.

Granville, Annapolis county, is a scattered settlement of some 300 people, situated on the right or north bank of the Annapolis river, four miles east of or above Granville Ferry. Both banks of the Annapolis river, from the town of Annapolis to the head of navigation at Bridgetown, a distance of about fifteen miles, are thickly settled by a thrifty, agricultural and fruit-growing population.

In 1901-02, the sum of $851.02 was expended in constructing a pile-wharf, 90 feet long, 25 feet wide, with an L 25 feet long, giving a face length of 50 feet along the face of the wharf. The wharf is 18 feet high, carrying at high water a depth of 16 feet.

In 1902-03, the sum of $857 was expended in completing the wharf, in constructing a road approach 900 feet long, and in building a freight shed 26 by 14 feet on the outer end of the wharf.

In 1903-04, the sum of $199.50 was expended in filling the angle made by the L with the main portion of the wharf, with substantial pile-work, to give more room for teams to turn. The piece of new work is triangular in shape, being one-half a rectangle 50 feet long and 25 feet wide.

Spring tides rise about 27 feet.

GREEN COVE.

Green Cove, Victoria county, is a small fishing station on the north-eastern coast of Cape Breton island, about midway between North Bay, Ingonish and Neils Harbour, being about five miles north from the former and four miles south from the latter.

The cove is a small indention in the general coast line, about 400 feet in depth and 900 feet in width, and is protected on the southern end by a reef, and from the eastward by outlying ledges.

During 1889-90, the sum of $200 was expended by the department in improving the landing beach for boats, at the northern end of the cove, by the removal of bedrock and boulders.

On February 4, 1903, a contract was entered into for the sum of $6,475 for the construction of a breakwater extending from the shore to the innermost of the outlying ledges, a distance of 450 feet, but actual work was not commenced during the year 1902-03.

The work under contract was 450 feet in length and 16 feet wide at a height of 2 feet above high water, with sides sloping 3 to 1 on the outer and 2 to 1 on the inner face, and top rounded ; the inner 180 feet consisting of quarried stone embankment, and the outer 270 feet of a stone embankment, with cribwork core.

Construction was commenced on August 4, 1903, but owing to an extremely stormy autumn, causing considerable damage, and consequent delay, the progress was slow, and up to the end of December, when work had to be suspended for the winter, only about one-half of the work under contract was completed. The work was resumed on the opening of navigation in May, and at the end of the fiscal year it was completed, excepting some slight trimming of the stone slopes, which was finished on July 8, 1904. The expenditure for the year 1903-04 was $6,432.50.

HAMPTON.

Hampton, formerly Chute's Cove, Annapolis county, is situated on the south-east side of the Bay of Fundy, twenty-seven miles north-east of Digby Gut and six miles north-west of Bridgetown, an important station on the Dominion Atlantic Railway. It has a population of about 200 people, engaged in fishing, farming, and the export of cordwood and timber.

In 1855 and 1856, a small pier, 165 feet long was built near the western side of the cove, the provincial government contributing $600 to its cost. The site was chosen by commissioners, apparently without professional advice, and was objectionable on many accounts. At a cost of $3,000 in 1879, an addition of 121 feet was made by the department, and the older portion of the work was strengthened with the hope of remedying some of the defects of location.

In 1881, on further examination, it was found that the original work had been badly undermined by the sea and that owing to the direction of the pier the shingle was fast shoaling on the inside. It was therefore decided to rebuild the structure on another site about half a mile to the eastward, which was carried out at a cost of $2,300. The new pier, as then completed, was 246 feet long, more substantially built, and much better located than the old one. It being situated immediately to the westward of a small brook which serves to keep the schooner berth alongside free from sand. In 1888-9, it having been found that the stream had worked under the foundation, endangering the whole structure, the department expended the sum of $750 in close-piling the inner face, levelling up the top of the work, which had settled in places, putting in some additional ballast, and effecting general repairs to the covering and break.

In February, 1889, during a heavy freshet the brook again gave some trouble, tearing away its banks and the gravel beach, and threatening to undermine the breakwater.

In 1890-91, the department spent $21 in repairing the damage and in turning the brook into its original channel. In 1892-93, the breakwater being found not quite long enough to give convenient berth to schooners, the department applied the sum of $1,500 in constructing a block 40 feet long, 27 feet wide on top and 27 feet high on the outer end, and in repairing about 100 feet of the inner end of the old work by raising the inner face, putting in new floor stringers and covering them with new planking, thus putting the work in thorough repair.

In the year 1898-99 the sum of $1,999.79 was expended in extensive repairs of the breakwater. The whole top of the work for the outer 185 feet in length, 20 to 26 feet in width, was raised with new work for a height of from 2 to 4 feet, rendered necessary by the great and unequal settlement of the work caused by the scouring action of the little stream that discharges alongside and has made its way beneath it. To prevent a repetition of this action, the inside face of the breakwater was protected for a length of 80 feet with a puddle wall, faced on the outer side with 3-inch plank. The breakwater has a total length of 270 feet, a width of from 20 to 26 feet, and a height at the outer end of 24 feet, where at high water ordinary spring tides there is a depth of 21 feet of water.

In 1902-3, the sum of $207.63 was expended in sheathing with close-piling about 53 feet on the shore end of the east side of the breakwater, to prevent the little stream that issues to the east of the breakwater from undermining the work.

In 1903-4, the sum of $49.99 was expended in renewing a small quantity of close-sheathing that ws torn off by ice during the previous winter.

The total expenditure to June 30, 1904, including a refund to the provincial government of $1,538.10, is $11,366.51.

The work was transferred to the control of the Department of Marine and Fisheries on June 12, 1888.

Spring tides rise 32 feet; neaps 28 feet.

HARBOURVILLE.

Harbourville, King's county, is situated on the south shore of the Bay of Fundy, fifty-three miles north-east from Digby Gut. The population of the settlement is about 200 people, engaged in fishing and farming, the former being the staple industry. The harbour, which is only 400 feet long by 200 feet wide, and dry at low water, is formed by the mouth of Givan's brook, and affords at high water complete shelter from storms from all quarters to vessels drawing up to 14 feet of water.

The works here consist of two breakwaters or piers, one on either side of the entrance of the harbour. They were built many years ago, before confederation, by the provincial government, when the shipping business of the place was considerably greater than it has been since the opening of the Dominion Atlantic Railway in 1868.

The western breakwater was extended by the department in 1876, at a cost of $2,000, since which date numerous small expenditures, aggregating up to 1897, to $7,861.09, have been made in repairs and renewals, to one or other of the piers. Both works are of open-faced round-log cribwork, their outer end being close-sheathed with flatted spars. In the year 1900, general repairs and improvements were made, consisting of the widening of the outer end of the western breakwater to the full width of the rest of the work (45 feet), and its extension one panel length (12 feet), also the extension of the eastern breakwater or wharf by a new piece 80 feet long and 20 feet wide, designed to protect vessels lying at the breakwater.

In 1903-04, the department expended the sum of $499.71 in general repairs and renewals, the work done consisting of the repair and refilling with ballast of the break of the main breakwater, the renewal of the guard timbers of both the breakwaters and the wharf on the north side and the thorough repair, including new top timbers and cross-ties, of the crib walling around the little inner harbour, in which fishing boats find berth and anchorage.

Spring tides rise about 38 feet.

The total expenditure to June 30, 1904, is $11,633.72, including a refund of $323 to the provincial government in 1887-88.

This work was transferred to the control of the Marine and Fisheries on June 12, 1888.

HAWK INLET.

Hawk Inlet, Shelburne county, is on the extreme southern end of Cape Sable island and the centre of a very important fishing station. The inlet has never been navigable for even small boats at all tides and during storms fishermen often had to either refrain from going out, or else being out, were unable to get home until after the tide had risen sufficiently to allow the boats to float in. In the fiscal years 1901-02 and 1902-03, the sum of $700 was expended in making a cut through the flats.

During the fiscal year 1903-4, an additional sum of $500.04 was expended in widening and deepening the channel and removing about 110 tons of boulders generally ½ a ton in weight, some of which had to be blasted.

The work was done by tide-work under some difficulties, with ploughs and harrows so as to allow the loose sand being carried away by the tides.

The channel is now 1,000 feet in length and 20 feet wide with 3 to 5 feet of water at low water ordinary spring tide, which is sufficient to float small boats at all times of tide and accommodates the larger ones at about ½ flood. This channel is now used by the fishermen and is of much advantage to them in seeking shelter, and shortening the distance to the fishing grounds by 1 to 2 miles.

HERRING COVE.

Herring Cove, Halifax county, is a small, narrow and nearly land-locked basin or inlet, situated on the west side of the mouth of the harbour of Halifax, 5½ miles in a direct line nearly south from the city. Around the cove is a fishing village of about 450 persons, wholly dependent upon fishing. The annual value of the catch is $100,000. In 1874, the department spent the sum of $2,400, in dredging a bar of sand and silt that had formed at the entrance of the cove, a little over 12,000 cubic yards of material being removed. In 1894-5, the bar having reformed, the department dredge 'George Mackenzie' dredged 12,915 cubic yards of sand, besides numerous large boulders. On February, 1903, a contract (No. 4599) ($11,475) was awarded for the construction of a breakwater on the east side of the mouth of the cove. The work is 150 feet long, 35 feet wide on top, and 20 feet high at the outer end, where, at high water ordinary spring tides there is about 16 feet of water. It is substantially built of round-log cribwork, the lower portion up to half tide being of creosoted timber, to resist the ravages of the limnoria.

An additional sum of $75 was paid to the contractors for treating the upper timbers of the breakwater with carbolineum avenarius.

Spring tides rise 6 feet, neaps 5 feet.

The expenditure for the fiscal year 1903-4 was, $8,159.

HORTON LANDING.

Horton Landing, or Lower Horton, is situated at the eastern end of King's county at the mouth of the Gaspereaux river, about midway between Avonport and Wolfville. It is a station on the Dominion Atlantic Railway, and situated in the richest and most fertile agricultural district in the province.

A wharf was built on the left bank, near the mouth of the river, by the provincial government, from 70 to 80 years ago. This structure having fallen into decay and become so dilapidated at to be useless for shipping purposes, was rebuilt by the department in the year 1888-9, at a cost of $2,252.88. The new structure is built upon the site of the old. It is 172 feet long, 65 feet wide at the outer end and 23 feet 6 inches wide at the inner end. It is of open timber cribwork, well fendered and ballasted and covered with plank. The site is a safe and sheltered one being near the mouth of the river and though the work is dry at low water, owing to the great range of tide, from 40 to 48 feet, vessels drawing 18 feet can reach it at high water.

In 1903-4, the sum of $70.20 was expended in renewing six mooring posts and a few planks in the floor.

INDIAN BROOK FLATS.

Indian Brook Flats, Shelburne county, the site on which the wharf at this place is built, consists of a line of flats running from the shore of Cape Sable island into Barrington Passage, and is distant from the village, (often called North East Point) half a mile to the south-west. This wharf not only accommodates the people of the village but also about 300 or 400 other people living from 1 to 2½ miles therefrom. The occupation of the population is fishing, and they have, hitherto had no facilities

whatever for carrying on their vocation. In order to better their condition in this respect, the department in the fiscal year 1902-3, purchased the only available site for a wharf at this place, on which a small structure already existed, together with the right of way to the public road, and the construction was commenced, the amount expended was $2,648.81.

During the fiscal year 1903-04 the wharf was completed ; it consists of four distinct sections ; a rock bank approach, 41 feet in length ; a piece of alternate block and span work, 56 feet in length ; a pile-trestle bent stem, 374 feet in length and a pile trestle-bent head, 40 feet in length, making a total length of wharf of 511 feet which carries it from the shore to the channel at the outer edge of the flats. The approach is of the usual rock-bank style, 27 feet wide on top and has a height at the outer end of about 9 feet. The block and span work consists of two blocks of round-log, stone-filled cribwork, each 20 feet long and separated by a clear span of 16 feet in length ; it has a width on top of 18 feet and a height at the outer end of about 10 feet. The stem consists of 34 pile-trestle bents placed 11 feet distant, centre to centre of piles, with a common width of 16 feet, and having a height of 11 feet at the outer end. The head of the wharf is 40 feet in length and 50 feet wide on top, built of 5 pile-trestle bents, well fendered and braced, and has a height of 23 feet at the outer end, standing on the extreme edge of the channel. The expenditure for the fiscal year 1903-4 was, $672.90.

IONA.

Iona, Victoria county, is on the northern side of Barra strait, which connects the Great with the Little Bras d'Or lake. It is a station on the Intercolonial Railway, at the northern end of the Grand Narrows Railway bridge, and a landing place for the steamers of the Bras d'Or Steam Navigation Company.

During the winter months, ice and weather permitting, a steamer carrying mails and passengers keeps up daily connection between Baddeck and Iona; owing to difficulties in opening the draw-bridge during the winter on account of ice and other causes, the steamer could not at all times reach the old wharf on the western side of the bridge, it was therefor decided to construct, on the eastern side of the railway bridge, a wharf extending into 10 feet at low water and connected with railway station by a road 350 feet in length. The work was done during the years 1901-2-3.

The wharf is a block and span structure, 260 feet in length, consisting of six cribwork blocks, with openings or spans between them, 18 feet wide. The three inner blocks are 40, 22 and 22 feet long respectively, and 20 feet wide; the three outer blocks are 22, 22 and 42 feet in length, and 30 feet wide on top. They are constructed of round timber, laid open-faced, with creosoted timber substructures, fully ballasted, double fendered on the sides and the outer end, and the outer faces of the three outer blocks close-sheathed.

The sum of $5,000 was voted for expenditure during 1903-4, towards the extension of the wharf. Plan and specification were prepared, and on May 20, 1904, a contract was entered into, in the sum of $10,230 for its construction, but up to the end of the fiscal year, the work under contract had not been commenced.

On April 22, 1904, the ice forced in by a northerly wind destroyed the outer 30 feet of the superstructure of the outer 42 foot block, leaving the creosoted substructure uninjured. On June 17, 1904, instructions were given to expend the sum of $1,300 in repairing the damage done, and in placing the wharf in condition to carry trains, but of this amount the sum of $684.45 only, could be expended by the end of June.

ISLAND POINT.

Island Point, Victoria county, is on the south side of Boularderie Island, eighteen miles from the bridge crossing the Little Bras d'Or at the head of St. Andrew's channel, an arm of the Bras d'Or lake.

A wharf, 120 feet in length, and 20 feet in width, with an 'L' at the outer end, 20 by 21 feet, extending to 21 feet at ordinary lake level, and consisting of blocks and spans, was constructed at this place by the department, during 1886-87.

During 1892-3, the sum of $499.48 was expended on repairs to the wharf, which had been damaged by ice.

The ravages of the teredo below, and the natural decay of the wood above the water level, caused the work to settle and become dangerous, and the sum of $550 was appropriated for expenditure in repairs during 1902-3.

When the work was visited to start the repairs, it was found that the inner blocks required to be reconstructed, and that the top of the outer block had been carried away, down to 3 feet below low water, and as the amount voted was entirely too small to reconstruct the whole work, the sum of $513.37 was expended in reconstructing the inner end, and in procuring a portion of the native timber required to reconstruct the outer block.

The sum of $1,400 was voted for expenditure during 1903-4, for the reconstruction of the outer block with creosoted timber piling.

Plan and specification for the proposed work were prepared, and the balance of the native timber and the creosoted timber were ordered to be delivered early in the spring, but owing to delay in delivery of the creosoted timber, and the difficulty in procuring a suitable pile-driver, the work had not been started at the end of the fiscal year. The amount expended during the year was $915.31.

The total expenditure to June 30, 1904, is $3,881.70.

JANVRIN'S ISLAND.

Janvrin's island, Richmond county, is a large island to the westward of Madame island from which it is seperated by Mousselier's passage.

The sum of $2,000 was voted for expenditure during 1903-04, towards the construction of a wharf on the island. A plan and specification were prepared for a native timber block and span wharf, 195 feet in length, 16 feet wide, and extending into 8 feet at low water to be built on the northern side of Janvrin's harbour were prepared. The materials required were contracted for to be delivered early in the spring, but they could not be delivered until after the end of the fiscal year, the sum of $24.20 was expended for salary and expenses of the foreman while making arrangements for the delivery of the materials.

JUDIQUE.

Judique, Inverness county, is on the east side of St. George's bay, ten miles south of Port Hood, and sixteen miles north from the entrance to the Strait of Canso.

During 1898-99-1900, a breakwater 725 feet in length and 20 feet in width, with an 'L' 20 by 20 feet at the outer end, and extending into 6 feet at low water, was built by the department at McKay's point, for the protection of fishing boats.

The work was constructed of round timber, laid open-faced, with creosoted timber substructure, close-sheathed around the outer end and the 'L,' and protected on the seaward side by a talus of stone.

On September 12, 1900, during a severe north-westerly gale, the work sustained slight damages.

During the year 1902-03, the sum of $898.77 was expended on repairs and improvements as follows :—The floor stringers and the covering for a distance of 137 feet, where they had bene distributed, were replaced ; the outer face-chambers for a distance of 550 feet were reballasted, and 407 lineal feet of the cap-timber were renewed.

During the year ended June 30, 1904, the sum of $398.48, was expended in completing the improvements, by close-sheathing, the seaward face, for a distance of 400 feet.

Total expenditure to June 30, 1904, is $21,204.36.

KINGSPORT.

Kingsport, King's county, formerly known as Oak Point, is a village of some 500 people, on the south-west side of the basin of Minas, between the mouth of the Cornwallis river and Cape Blomidon. It is the terminus of the Cornwallis Valley Railway (opened December, 1890, and now a branch of the Dominion Atlantic Railway), running to Kentville, the county town, fourteen miles to the south. A pier, 445 feet in length, built of piles, already stood here when the harbour was taken in charge by the Department of Public Works. In 1873-74, the department built cribwork 12 feet wide on the eastern or exposed side of the wharf for the purpose of breaking the force of the sea. In 1875, the work was extended a length of 240 feet, by a width of 30 feet, in order to increase the sheltered area, and afford earlier access to the roadstead in lee of the pier, which, owing to the great range of tide, was dry between half ebb and half flood. In subsequent years repairs were several times made. In December, 1890, the Cornwallis Valley Railway was opened for public traffic, and about the same time the wharf, which forms the terminus of the railway, and on which is a track, was leased by the department, to the railway company.

During the fiscal year 1901-02 the sum of $9,276.72 was expended in rebuilding the upper half of the outer block of solid cribwork, 270 feet long, which was built in 1875. A widening or re-enforcing block 10 feet wide was also built on the north side for the whole length of this outer portion.

In 1902-03 the sum of $4,934.60 was expended in continuing the repairs and renewals to the works begun the previous year. The outer 130 feet in length of the pier was taken down to a height of 15 feet and rebuilt in substantial cribwork. On the north side of the pier for its whole length of 700 feet re-enforcing block, 10 feet wide was partly built.

In 1903-04, the sum of $5,052.61 was expended in continuing the repairs and renewals carried on during the previous few years. The work done consists in the completion of the 10-foot re-enforcing block on the north side, the thorough renewal of 130 feet in length of the pile work portion of the shore end of the pier and the repair of the next 100 feet shorewards, which is of cribwork and earth and stone filling.

Spring tides rise 48 feet, neaps 40 feet.

The total expenditure by the department up to June 30, 1904, including a refund to the provincial government of $1,738.14 in 1887-88, is $46,931.90.

L'ARDOISE.

L'Ardoise, Richmond county, is situated on the eastern side of St. Peter's bay, near its entrance from the Atlantic ocean, and about nine miles east from the southern entrance to St. Peter's canal.

An isolated breakwater, built in 1876-77, off Martin's Point, in from 5 to 10 feet at low water, and almost destroyed in 1883, was reconstructed during 1891-92-93.

The work consists of a timber core, 400 feet long and 20 feet wide, placed over the remains of the original structure, in from 1 to 4½ feet at low water, its top standing 1 foot above high water, the whole being covered with stone, sloping 3 to 1 on the seaward side and outer end and 2 to 1 on the inner side and inner end. The whole surface of the work, above low water mark, was covered with stone of not less than 15 cubic feet each, and the spaces between these stones, above the line of high water, were filled in with concrete.

Since the completion of the work, the covering stone on the seaward and outer end slopes, which had been disturbed by the sea, have been replaced, and a concrete wall, 3 feet wide on top and 4½ feet in height, with a top flush with the surface of the covering, has been constructed over the outer face and the ends of the cribwork core.

The breakwater averages 17½ feet in height from the original bottom up to the top of the stone covering, which is 5 feet above high water, and 10 feet above low water springs.

In order to stop the undertow from sweeping into the harbour through the gap, between the inner end of the breakwater and the shore to the eastward of it, a distance of about 1,200 feet, it was decided to close the gap by cribwork.

A plan and specification for the proposed work were prepared, and the contract for its construction, was entered into on December 29, 1903, in the sum of $24,820.

Owing to the delay in the delivery of the timber required, the work of construction had not been commenced by the end of the fiscal year.

The work under contract consists of a cribwork breakwater 1,145 feet in length, and of a stone embankment 50 feet long. The cribwork for a distance of 350 feet from the outer end is to be 20 feet wide on top and protected by a stone talus on each side, and for a distance of 795 feet it is to be 16 feet wide on top and protected by a stone talus on the seaward side. The stone embankment is between the outer end of the cribwork and the old breakwater, and is to be constructed with large quarried stone, sloping 3 to 1 on the outer, and 2 to 1 on the inner side.

The expenditure incurred in calling for tenders, &c., was $104.27.

LARRY'S RIVER.

Larry's River, Guysborough county, is at the western extremity of Tor bay, on the southern or Atlantic coast of Nova Scotia, 24 miles to the westward of Canso harbour.

The harbour, a channel through mud flats improved by dredging, was formerly protected from the eastward by a beach and bar of shingle. Since 1896 the point of the beach at the northern extremity of the bar and the bar itself have been lowered and carried inward toward the channel.

In order to restore the shelter formerly afforded by the beach and bar, a contract was entered into on September 22, 1902, for the construction of a breakwater, for the sum of $15,840.

The work under contract consists of two sections of stone embankment, respectively 125 and 379 feet in length, each 14 feet in width at the level of 2 feet above high water and 6 feet in average height, and a central section of cribwork 500 feet in length, 14 feet in width on top and 11½ feet in average height, protected on the seaward side by close-fendering and by a talus of stone sloping 2 to 1 from high water. The embankment and cribwork to be finished at a height of 4 feet above extreme high water. Spring tides rise 6½ feet.

In 1902-03, very little work was performed, operations not having been commenced till June 22. The amount expended on the work performed up to June 30, 1903, was $749.81.

During the fiscal year 1903-04, the work under contract was completed with the exception of placing 350 cubic yards of stone in the talus. The expenditure for the year 1903-04 was $13,627.50.

The work was completed in a satisfactory manner on July 16, 1904.

LINGAN.

Lingan, or Bridgeport harbour, Cape Breton county, is at the head of Indian bay on the northeast coast of Cape Breton island, about 5 miles to the eastward of the entrance to Sydney harbour. A large pond or basin, having a depth of 8 feet at low or 12 feet at high water, is separated from Indian bay by a beach of sand. The entrance, which forms the harbour, was deepened and straightened by dredging in 1878-80 to improve the facilities for shipping coal from the Lingan mines, since abandoned. It is now crossed by a bridge built by the provincial government for the accommodation of traffic over the beach between Lingan and Bridgeport.

A work of brush and stone 1,900 feet in length, constructed in 1876-8, afforded an efficient protection to the beach up to 1893, but has since been carried away in places over distances aggregating 1,400 feet.

In 1901-2 the sum of $1,999.60 was expended in constructing 1,000 feet of brush and stone work, 14 feet in width and 4¾ feet in average height ; leaving 1,370 feet 17 feet in width and 3 feet in average height, to be constructed to complete the work undertaken.

In 1902-3 the sum of $599.89 was expended in constructing 500 feet of brush and stone work.

During the fiscal year 1903-4 the sum of $998.05 was expended in extending the beach protection work 480 feet or to within 350 feet of the entrance, and in constructing a cross-wall of brush and stone 300 feet in length between it and the south end of the bridge.

LITTLE HARBOUR.

Little Harbour (Arnold's Point), Shelburne county, is situated on the southeasterly extremity of Black Point, about five miles of Lockeport. It has a population of about 250 people, chiefly engaged in fishing operations. The fishermen have no protection for their boats and lose many valuable craft for want of shelter.

At its session of 1902, parliament made an appropriation of $1,700 for the construction of a breakwater wharf, 280 feet long, for the protection of this harbour, but the work could not be carried on in 1902-3, owing to the difficulty of procuring timber, the sum of $138.68 only was expended.

During the fiscal year 1903-4, the sum of $2,013.49 was expended on this work, but the structure was not completed. When completed the breakwater will have a length of 280 feet, composed of 73 feet of rock-bank approach, 24 feet wide, and 207 feet of continuous cribwork 20 feet wide and 14 feet high at the outer end.

Spring tides rise here 6½ feet, neap 5 feet.

LIVINGSTONE'S COVE.

Livingstone's Cove, Antigonish county, is on the southeastern shore of Northumberland strait, about two miles south-west from Cape George.

For the purpose of affording shelter to the fishing boats of the district, and a landing place for steamers and small vessels, a breakwater was commenced by the department in 1899, and completed in September, 1902.

The work extends out into 9 feet at low water spring tides, it is 312 feet in length and is approached by a road cut through the clay bank, 105 feet in length. The breakwater is a continuous structure, and consists of a shore abutment with stone retaining walls, 30 feet long and 18 feet wide, on top of a cribwork block 80 feet long and 18 feet wide, and of a cribwork extension 202 feet in length and 24 feet wide with an 'L' on the southern side of the outer end, 24 by 24 feet. The cribwork is constructed with native squared timber, laid with 7-inch openings, it is fully ballasted and fendered, and the northern, or seaward face, the outer end and the southern face of the 'L' are sheathed with hardwood.

It having been found that the teredo was attacking the work, principally on the seaward face, during the fiscal year ended June 30, 1904, the sum of $1,800 was expended in placing a heavy stone talus along its seaward face, extending from high water mark on the work with a slope of about 3 to 1.

Spring tides rise 4½ feet.

The total expenditure to June 30, 1904, is $15,856.60.

LOCKEPORT.

Lockeport, Shelburne county, is situated on the Atlantic coast, about fourteen miles south-east of Shelburne, and has a population of about 800. It has been and is one of the most important centres of the fishing industry.

During the years 1899-1900 and 1900-1901, the sum of $3,944.64 was expended in the construction of a breakwater. In 1902-3, the sum of $299.64 was expended in repairs of this work.

During the fiscal year 1903-4, the sum of $225.56 was expended in extending the works a further distance of 520 feet, consisting in the construction of a double row of posts driven into the sand 5 feet, planked on the outside with 2-inch planks and on the inside with 1-inch boards, the whole securely fastened. The rows of posts are driven, in a line parallel with the general line of the beach, 8 feet apart both longitudinally and laterally, and the space between them is filled in with sand. The work is in the shape of a crescent and particular care towards obtaining regularity of shape was taken.

LOWER WASHABUCK.

Lower Washabuck, Victoria county, is on the southern side of the eastern end of St. Patrick's channel, an arm of the Little Bras d'Or lake.

Crow Point is a small island, connected with the mainland by a gravel and shingle beach, about 900 feet in length and from 20 to 50 feet wide at high water, forming a snug little boat harbour inside.

As this beach was being wasted by the sea during easterly gales, and it was feared that it would eventually be cut through and destroy the harbour inside, it became necessary to protect it. During the year ended June 30, 1904, the lowest and narrowest portion of the beach, for a distance of 200 feet, was raised to a height of 3 feet above high lake level, by the construction of round timber cribwork, well bedded into the beach and fully ballasted, at a cost of $399.81.

LOWER WEST PUBNICO.

Lower West Pubnico, Yarmouth county, is a thrifty and thickly populated district, situated on the west side of Pubnico Harbour, from 30 to 35 miles south-east from Yarmouth. The people are engaged in fishing and farming.

In 1902-3, the sum of $1,000 was expended in rebuilding and converting into a public wharf an ancient cribwork wharf situated on the lower or southern end of the district. The outer 120 feet in length of the old work was substantially built in pile-work; it is 25 feet wide and from 8 to 14 feet high. At the outer end there is about 11 feet of water at high water ordinary spring tides.

In 1903-4, the sum of $895.62 was expended in building the middle portion of the wharf of which the reconstruction was begun in 1902-3. The piece of work built was 65 feet long, 30 feet wide and from 9 to 13 feet high. The stone approach from the shore end, a length of about 75 feet, was also raised from 1 to 3 feet and walled up with stone on the south side.

Spring tides rise about 12 feet.

MAIN-À-DIEU.

Main-a-Dieu, Cape Breton county, is a small harbour on the eastern coast of Cape Breton island, 10 miles north from Louisburg.

A breakwater 230 feet in length was built on the east side of the harbour in 1881-2. It consists of a cribwork core fully ballasted and covered with stone, sloping on the seaward side and at the outer end 3 to 1, and on the inner side 2 to 1.

During the year 1902-3, a plan and specification were submitted and tenders were invited for the construction of a breakwater on the west side of the harbour designed to stop the under-tow and thus make the anchorage safer.

The breakwater proposed is to extend 320 feet in from 6 inches to 2½ feet at extreme low water. It is to be of cribwork, 14 feet in width on top fully ballasted,

the seaward side to be close fendered and protected by talus of stone sloping 3 to 1 from high water. Spring tides rise 5 feet.

Up to June 30, 1904, a contract had not been entered into. The delay being due to difficulty in obtaining a title to the land required for the site of the proposed work, and for right of way thereto.

MALAGAWATCHT.

Malagawatcht harbour, Inverness county, is situated on the western side of the entrance to West bay, an arm of the Great Bras d'Or lake.

During the fiscal year 1903-4 the sum of $299.99 was expended in opening a channel for boats between the head of Malagawatcht harbour and River Denis Basin, over flats originally dry, and in constructing on each side, at the south end a protection work of brush and stone and cribwork, 100 feet in length. The new channel is 1,000 feet in length, 12 feet in width and from 1 to 1½ feet in depth at ordinary lake level.

MALIGNANT COVE.

Malignant Cove, Antigonish county, is situated on the southeastern shore of Northumberland strait, about midway between Arisaig and Georgeville, and distant about 4 miles from each.

The sum of $5,000 was voted for expenditure during 1899-1900, towards opening a channel for boats through the gravel beach into a small pond at the head of the cove and for the construction of channel protection works. A plan and specification for works extending outward to 7 feet at low water spring tides were prepared, and the sum of $3,893.35 was expended during the year in procuring the materials required for the construction of the proposed works.

The work proposed included the construction of piers, placed 60 feet apart, on either side of the channel which was to be excavated to a width of 30 feet in the bottom, and to a depth of 2 feet below low water. The piers extending 248 feet inwards through the beach, from low water outside, to be 10 feet wide on top, and founded at low water ; those extending from low water outwards to be 16 feet wide for a distance of 60 feet, and 22 feet wide for a distance of 30 feet. All cribwork was to be built of round native timber laid open-faced, fully ballasted, and close-sheathed at the end and on the channel faces, the sheathing on the channel faces of the work through the beach to be driven into the beach to a depth of 4 feet below low water mark.

In 1900-01, the sum of $6,123.64 was expended in the construction of the outer piers, each 90 feet in length, and of a portion of the inner pier on the eastern side of the channel 188 feet in length.

During 1901-02 the work proposed was completed, and a cribwork extension to the western inner pier, 60 feet long and 10 feet wide, was constructed to prevent the re-opening of the old channel through the beach, the expenditure incurred amounted to $2,464.85.

In the year 1902-03 the inner end of the western pier, which for a distance of 70 feet was built lower than the outer portion was raised to the same level, a height of 2 feet and planked over ; and beach protection works consisting of a cribwork block 40 feet long, 12 feet wide and averaging 10 feet in height, and an extension of piles, brush and stone 50 feet long were constructed on the eastern side of the eastern pier, to prevent the sea from washing over the beach and carrying sand into the channel between the piers. The amount expended during the year was $799.94.

During the fiscal year ended June 30, 1904, the sum of $1,099.07 was expended in close-piling the outer ends of the piers, and their faces for a distance of 20 feet from the end with hardwood piling ; in replacing ballast washed out of the ends of the

piers ; in extending the beach protection work on the eastern side of the eastern pier for a distance of 40 feet with cribwork ; and in procuring materials for extending the beach protection a further length of 90 feet.

Total expenditure to June 30, 1904, is $14,380.85.

MARGAREE.

Margaree harbour, at the mouth of the Margaree river, Inverness county, is on the west coast of Cape Breton island, about thirty miles north-east of Port Hood. It has a narrow intricate channel through which the tide runs at the rate of four knots, and its entrance is obstructed by a bar of shifting sand, over which there is, at time, a depth of only 5 feet at extreme low water.

Expenditures have been made by the department in the construction and maintenance of channel protection and improvement works on the west side of the entrance, and in the construction of beach protection work on the east side.

The works on the west side include works built by the provincial government and extended by the department, and works of improvement undertaken in 1900-01.

The old provincial government works (reconstructed by the department) extended 400 feet from the shore, across what was originally a false channel, to a large rock opposite the inner entrance and thence, at right angles, to the edge of the channel.

The work built by the department extends from the north side of the outer provincial government works outwards, along the west side of the channel 595 feet. It is in four sections : 85 feet (built in 1876), 130 feet (built in 1879), 200 feet (built in 1890) and 180 feet (built in 1899), respectively, 18, 16, 18 and 20 feet in width on top, and 15, 14, 12 and 16 feet in height. Each section is of round timber, open-faced and is fully ballasted and close-fendered at the sides and outer ends. The top of the covering is from 4 feet 4 inches to 5 feet above extreme high water. The depth, at extreme low water, along the channel face, originally varied from 7 to 2½ feet. Spring tides rise 4 feet.

The improvements undertaken in 1900-01, but not completed, were the deepening along the channel face of the extension to 8 feet at low water over a distance of 200 feet ; and the construction of a shear-dam within the entrance, 180 feet in length, including 25 feet of brush and stonework 11 feet wide on top, 100 feet of pile and brush work 10 feet wide, and 55 feet of cribwork 22 feet wide founded on brush work in from 1 foot 3 inches to 9 feet 9 inches at extreme low water. During the year 1900-01, the sum of $3,695.30 was expended, $400 in repairing the channel face of the outer provincial government work ; $1,796 in procuring materials and constructing the brush and stone work, the pile and brush work, and the substructure of the cribwork of the shear-dam, and $1,499.30 in about one-half of the rock excavation required to give 8 feet at low water along the channel face of the extension.

In 1901-02 the sum of $3,065.57 was expended, $995.78 in completing the shear-dam with the exception of making a roadway over the brush and stone at the inner end, and $2,069.79 in completing the submarine rock excavation with the exception of the removal of a small quantity of excavated material at the inner end of the cutting, and of some points of ledge rock over which there is a depth of only 6 feet 9 inches at extreme low water.

Of the $500 appropriated for 1902-03 the sum of $482.32 was expended : $219.41 in completing the shear-dam ; $61.82 in continuing the channel-face rock excavation ; and $201.09 in repairing and improving the channel protection works.

During the fiscal year 1903-4, the sum of $799.94 was expended in continuing the channel face rock excavation undertaken in 1900-1901.

The total expenditure to June 30, 1904, including $3,378 expended in beach protection works (east side) and a refund of $274.87 to the provincial government, is $28,827.70.

MARGARETVILLE.

Margaretville, Annapolis county, is the most important village on the south coast of the Bay of Fundy, between Digby Gut and Scott's Bay; it is forty-two miles north-east from the former, thirty-six miles south-west from the latter, and eight miles north from Middleton, an important station on the Dominion Atlantic Railway. It has a population of about 500 engaged in fishing and farming.

A pier was begun in 1837 by the provincial government, and subsequently extended to a length of 471 feet. The work was taken over by the Public Works Department in 1871, since which time it has had frequent renewals and repairs. In December, 1885, the pier was severely damaged by a storm, a breach nearly 150 feet long being made clear through it, besides receiving other injuries. The Margaretville Pier Company transferred their title to the pier to the government on August 3, 1886. In 1886-1887, the above described damage was made good. In October, 1890, a severe gale made a breach of 117 feet in the outer portion of the work, besides doing other damage. In March, 1894, the remaining block, 86 feet in length, seawards from the 117 feet gap, was totally destroyed. In 1897-99, the outer block was rebuilt. This new block, which is substantially built of round log cribwork, close-sheathed on the seaward face and outer end, is 185 feet long, 42 feet wide and from 22 to 32 feet high. In 1900-1, the sum of $500 was expended in renewing the floor on the shoreward end of the work and other repairs.

In 1901-2, the sum of $1,560.50 was expended in sheathing the seaward face of the breakwater for a length of 155 feet on the shore end, in removing gravel from the eastern or land side to improve the schooner berth, and in constructing a new breakwater 250 feet to the eastward of the main work. The new breakwater is 110 feet long, 16 feet wide, 7 feet high at the shore end, 25 feet wide and 16½ feet high at the outer end. The work is substantially built of round-log cribwork, well fendered, bolted and filled with ballast.

Spring tides rise about 30 feet. In 1903-04, the sum of $510.72 was expended in rebuilding a short piece on the shore end of the breakwater, 14 feet long, 25 feet wide and 8 feet high. Also in constructing a small inner block on the east side of the shore end, 22 feet long, 7 feet wide and 8 feet high. A few petty and miscellaneous repairs were also made to the flooring of the breakwater.

MCKAY'S POINT.

McKay's Point, Victoria county, is on the western side of the entrance into St. Patrick's channel, an arm of the Little Bras d'Or lake, and about 2½ miles by water, from Baddeck, the shiretown of the county.

The steamer 'Blue Hill,' carrying mails, freight and passengers makes, during the season of navigation, two return trips daily between Baddeck and Iona Station on the Intercolonial Railway, and as McKay's Point is on her course, in order to place the inhabitants of the district in direct communication with those places, on April 30, 1904, a contract was entered into, in the sum of $5,442, for the construction of a wharf extending to 12 feet at low water; but owing to delay in the delivery of the creosoted timber required, work was not commenced by the end of the fiscal year.

The work under contract is a block and span structure, 206 feet in length and 20 feet wide, with an 'L' on the western side of the outer end 20 by 20 feet; and is composed of a shore abutment 28 feet long; of four cribwork blocks, 17 feet long, and of an outer block 20 by 40 feet, with openings or spans between them, 18 feet in length. The blocks are to be constructed of round timber, laid open-faced and creosoted to high water, fully ballasted and fendered, and the outer faces of the outer block are to be close-sheathed with hardwood as a protection against ice. The expenditure incurred in calling for tenders, &c., was $191.15.

MCNAIR'S COVE.

McNair's Cove, Antigonish county, is on the west side of St. George's bay, about 2 miles to the southward of Cape George.

A breakwater 400 feet in length and 20 feet in width was built on the north side of the cove during 1872-73-74, and in 1878 a length of 20 feet was added thereto. In 1879 the work was carried away by drift ice to within 100 feet of the shore end, down to from 3 to 6 feet below low water. During the summer of 1883, 70 feet of the shore end was rebuilt, and during the winter of 1884 the work was extended 94 feet. In April, 1884, the 94 foot extension was badly damaged by drift ice, and was subsequently carried away.

During 1886-87-88, the bottom of the damaged work was dredged out, and a work 160 feet in length, 34 feet wide on top, with a sloping face on the seaward side, was constructed and on its completion the total length of the breakwater was 330 feet.

The work was constructed entirely of native timber, and as it became much weakened by the action of the teredo, during 1890-91-92-93-94, the outer end, and on each side of it for a distance of 20 feet, was protected by creosoted timber close-piling, and its seaward face, by talus of quarried stone.

During the years from 1897 to 1901, the timber wall under the sloping face, which was destroyed by the teredo, was renewed down to low water and close-sheathed with hardwood timber, the stone talus was raised up to the top of the close-sheathed, and the work was reballasted and re-covered where necessary. Further the mouth of a small brook, at the head of the cove, which was continually shifting to the detriment of the boat landing, was made permanent by the construction of a shear-dam of brush and stone.

During 1901-2, the sum of $1,197.17 was expended in placing 80 cubic yards of very large stone on the talus, and in procuring the materials required for the widening and renewing of the top of the inner end of the work, which was built in 1872 and which was only 20 feet wide.

In the year 1902-3, the amount of $1,094.58, was expended in reconstructing the top of the inner end of the work, and in widening it to 30 feet for a distance of 120 feet, the materials for which were obtained in the previous year ; and in placing about 85 cubic yards of large stone on the talus along the seaward face of the work.

The sum of $6,000, was voted for expenditure during 1903-4, towards the construction of a new end and 'L' with creosoted timber substructure, 32 feet wide and 80 feet in length, but owing to delay in the delivery of the creosoted timber, up to June 30, 1904, the work of construction had not been commenced. Out of the amount voted, the sum of $4,768.13 was expended for materials.

Spring tides rise 4 feet.

Total expenditure up to June 30, 1904, is $73,095.04.

MCNUTT'S ISLAND.

McNutt's Island, Shelburne county, is about three miles long with an average width of one mile, situated at the mouth of Shelburne harbour. On the north side of the island, and about six miles south by west from the town of Shelburne, lies the Horseshoe beach, so called, which protects the only place of shelter in Shelburne harbour, during southerly gales. This beach was broken through so badly by the seas that its complete demolition was a question of but a few years.

In order to prevent the destruction of this shelter, the department, in the fiscal year 1898-99, constructed a cribwork beach protection along the outer side of the beach. This protection stood very well, but was not long enough, as the beach washed away at its northern end and undermined the works.

During the fiscal year 1903-04 the sum of $489.28 was expended in repairing this work and extending same. The old work was 265 feet in length, 9 feet wide on top and had an average height of 9½ feet. The northern end was rebuilt on a length of 40 feet, on a height of 10 feet, and a further length of 100 feet was constructed. The width of the new work averages 9 feet and the height 10 feet. The whole work is constructed of round-log, stone-filled cribwork, well ballasted and fendered. The work was covered with 4-inch poles to secure the stone ballast from being carried away by ice and the waves.

Spring tides rise here 6½ feet, neap 5 feet.

MELBOURNE.

Melbourne is a settlement of some twenty or thirty families, engaged in fishing and farming, situated on the east side of the estuary of the Chebogue river, about eight miles east south-east from the town of Yarmouth.

In 1903-04, the department expended the sum of $715.52 in constructing a block and span wharf, 100 feet long and 25 feet wide, comprising three blocks of substantially built cribwork, each 25 feet wide, 9 feet long and from 12 to 15 feet high, two spans of 12 feet each, and an approach of earth and gravel 50 feet long, walled up with large stone on either side.

Spring tides rise about 12 feet, neaps about 10 feet.

METEGHAN.

Meteghan, Digby county, is situated on the north side of St. Mary's bay, twenty-five miles north of Yarmouth, 20 miles south of Weymouth, two and one-half miles from Meteghan river and forty miles from Digby, the county town. The nearest railway station on the Dominion Atlantic Railway, which lies approximately parallel to the coast, and has its terminus at Yarmouth, is about seven miles distant. The whole coast of St. Mary's bay, from Digby to Yarmouth, is thickly settled, and is, in fact, almost one continuous straggling village for the whole distance of sixty-seven miles.

Meteghan, next to Digby and Yarmouth, is the largest and most important settlement of the bay shore, having a population of 1,000 people, engaged in farming, fishing, lumbering and general trade.

The harbour works consist of a breakwater and landing pier, built of cribwork, between 1837 and 1860 by the provincial government and the inhabitants. The pier is about 300 feet long and 20 feet wide. The breakwater 20 to 26 feet wide, runs out a distance of 925 feet from the shore, and has a return or ell of 85 feet at the outer end, which is 24 feet wide and 30 feet high, standing in from 25 to 27 feet depth at high water ordinary spring tides.

In 1875, at which date the work appears to have been taken over by the department, the breakwater was extended and repaired.

In 1878, the additional length of 100 feet was built with a portion of the ell at the outer end, at a cost of $3,000, and in 1881, the sum of $2,250 was expended in still further extending the structure by building an additional length of 50 feet on the ell. In 1882-83 the sum of $500 was expended in reballasting and close-piling portions of the work, and in miscellaneous repairs. In 1883-84, $32 was expended in securing some of the fenders and a portion of the flooring at the outer end. In 1884-85 some damage caused by a severe gale of the previous November was made good at a cost of $96.64 ; a breach 25 feet long and from 4 to 6 feet deep was closed with solid work; 40 feet of new break was added, and some new ballast put in to replace that washed out. In 1887-88, the seaward face of the breakwater was close-sheathed for 700 feet in length ; 575 feet of the inner face was repaired and sheathed, the whole work levelled up and some minor repairs executed ; the expenditure that year was $1.447.33,

which in the departmental report for the year is given as a refund to the provincial government on account of moneys expended by them between 1867 and 1879. In 1892-93 the department expended the sum of $299.72, in making slight repairs to the breakwater and in temporary repairs to the landing wharf. In 1893-94 the sum of $2,627.54 was expended in making thorough repairs to the landing pier and wharf, the works done consisting of rebuilding and face-fendering the outer block 50 feet in length, building a new top and back 8 feet thick to the next length of 16 feet, and thoroughly refendering and capping the remainder of the work, a length of 250 feet.

In 1897-98 the sum of $3,141.99 was expended in constructing a re-enforcing block along the whole length of the outer face of the ell of the main breakwater. This work, which was rendered necessary by the eating away of the bottom timbers by the limnoria, and the consequent settlement of the breakwater is 100 feet long, 12 feet wide and 4 feet high. The upper portion of the ell was also built 35 feet wide, and 4 feet high, which restored it to the height of the present work. The new work is well and substantially built of round-log cribwork, well fendered, ballasted and close-sheated on all exterior faces. In 1898-99 the sum of $1,093.20 was expended in renewing a length of 120 feet by 8 to 19 feet in height, and by 8 to 10 feet in width, of the lower portion of the outward end of the seaward face of the breakwater, which had been eaten away by the limnoria ; the work was close-sheathed for the same distance, and for 40 feet on the inner side ; about 10 feet in length of the flooring was renewed. A breach 30 feet long on the seaward side, adjacent shorewards to the 120 feet before mentioned, was also closed up.

In the fiscal year 1899-1900, the sum of $2,000 was expended in extensive renewals and repairs to the breakwater, the work done consisting of the rebuilding of 100 feet in length of the seaward face and 90 feet of the inner or shoreward face, about 8 feet wide from top to bottom of the work, placing top cross-logs all across the breakwater to tie the new portions together, and a new floor on the portions renewed.

In 1900-1, the sum of $3,499.95 was expended in rebuilding a serious breach made in the work by a severe gale in March, 1900. The new block, which had to be built from the bottom, is 180 feet long, 22 feet wide and from 18 to 22 feet high. In addition to this a length of 222 feet of the top of the breakwater was refloored and partly close-sheathed, the floor having been destroyed by the storm referred to.

In 1901-2, the sum of $3,199.93 was expended in continuing the restoration of the breakwater that had been going on for the last three or four years. The work done consisted of a piece 138 feet long, in about the middle of the length of the breakwater being taken down and rebuilt. Of the next 200 feet shorewards the northern face was taken down and rebuilt 10 feet wide.

In 1902-3, the sum of $2,999.47 was expended in completing the rebuilding of a piece in the middle of the breakwater, 123 feet long, 20 feet wide on top and from 3 to 11 feet high, that had been destroyed by a violent gale in the winter of 1901-02.

In 1903-4, the sum of $2,342.31, was expended in continuing the reconstruction of the work carried on during the past few years. The work done this year consists of the taking down and rebuilding of 80 feet in length of the shore end of the work.

Spring tides rise 21 feet; neaps 17 feet. Total expenditure to June, 1904, is $38,749.85, including a refund to the provincial government of $1,447.33 in 1887-88.

The work was transferred to the control of the Department of Marine and Fisheries on June 12, 1888.

METEGHAN RIVER.

Meteghan River, Digby county, empties into the Bay of Fundy, at the mouth of St. Mary's bay, almost directly opposite Grand Passage, between Long Island and Brier Island. The village at the mouth of the river is twenty miles south of Weymouth twenty-eight miles north of Yarmouth and two and a half miles north of Meteghan or Meteghan Cove. The population of the village is about four hundred people,

engaged in farming, fishing, lumbering and general trade. The nearest railway station on the Dominion Atlantic Railway which runs parallel with the Bay Shore, is about four miles distant. On the river, which is about eighteen miles long, are some twenty saw-mills, most of which send lumber down to the mouth of the river for export to the West Indies and United States, the total amount of the output aggregating a million feet board measure annually. The works here, which were built some years before confederation, presumably at the joint expense of the provincial government and the inhabitants, consist of two breakwaters, one on either side of the mouth of the river, and inclosing an area of about three acres, in which a depth of 10 to 15 feet is found at high water ordinary tides, giving ample berth accommodation and complete shelter to a large number of coasting and fishing vessels.

The north breakwater is about 400 feet long, 23 feet wide and 13 feet high at the outer end. Both breakwaters are built of stone-filled cribwork of the usual type. When the work came under the charge of the department, the older portions were much decayed, and extensive repairs were needed, which were made in 1873, at a cost of $4,500. In 1881-2, the sum of $2,000 was expended in rebuilding and repairing parts of both breakwaters. In 1882-3, the sum of $3,000 was expended in close-piling and extending the south breakwater a length of 80 feet, in general repairs to the north breakwater, and in removing from the dock a large quantity of rocks and boulders which were used as ballast in the new work. In 1890-1, $265.19 was expended in removing from the channel, near the shore end of the work, more rocks and boulders, that interfered with the keels of vessels lying alongside; slight repairs were also made under the same appropriation to both breakwaters. In 1898-9, the sum of $4,110.76 was expended in extensive renewals to the shore end of the south breakwater; the work taken down and rebuilt was 400 feet long, with an average width of 29 feet and an average height of 19 feet. This length was newly close-sheathed, and on the shoreward side of the same portion a new breakwater was built, 276 feet long and 6 feet high. In the fiscal year 1899-1900 the sum of $4,199.89 was expended in continuing the work of restoration of the main breakwater, a length of 216 feet of the shore end of the work, adjoining outwardly the portion of the work renewed, was taken down and rebuilt.

In 1900-01, the sum of $8,848.55 was expended in continuing the restoration of this work begun in 1898-99, and in removing gravel from the bottom of the stream between the two breakwaters; 184 feet in length was taken down and rebuilt from the bottom, an average width of 27 feet, and from 18 to 19½ feet high. The next 213 feet shorewards, rebuilt the previous year, was floored, including stringers, caps and planks.

In 1901-02, the sum of $3,999.99 was expended in continuing the work of restoration begun in 1898-99. The outer 113 feet of the work was rebuilt practically entire. In order to straighten the outer block of the work, it was widened 24 feet at the outer end, the new block tapering to nothing 83 feet shorewards from the outer end; 83 feet in length also of the outer end of the work was close-piled on the north side to protect it against scour by the river which issues at this side. A considerable quantity of gravel was also removed from the river channel to improve the approach to the wharfs.

In 1902-03, the sum of $942.41 was expended in completing repairs and renewals to the breakwater in progress during the past two seasons. The work done included the renewal of the upper portion of the outer end of the breakwater and in further deepening the river channel alongside the outer end of the work.

In 1903-04, the sum of $300.99 was expended in protecting with close-piling a length of 73 feet on the eastern side of the breakwater, that was undermined by ice and waves during the previous winter.

Spring tides rise 21 feet, neaps 17 feet.

The total expenditure to June 30, 1904, was $36,031.89.

This work was transferred to the control of the Marine and Fisheries on June 12, 1888.

MIDDLE RIVER.

Middle River, Victoria county, is a large stream emptying into Indian bay, on the northern shore of St. Patrick's channel, an arm of the Little Bras d'Or lake.

About 5 miles from its mouth, the river flows through alluvial soil, easily acted upon by the strong current during freshets, and in consequence a large amount of valuable land has been destroyed.

The sum of $2,400 was voted for expenditure during 1903-04 in the construction of a shear-dam, built with piles, brush and stone, 600 feet in length, to divert the stream into an old river bed, and away from the valuable lands.

Plans and specification for the work proposed were prepared, and the materials required were procured during the winter, but owing to the height of water in the river, caused by spring freshets, the work of construction was not commenced until the middle of June, and on June 30, 1904, 200 feet of the pile-work was completed and sheathed on the upper side, but the interior was only partly filled with brush and stone.

The expenditure for the year ended June 30, 1904, was $1,405.35.

MUSQUODOBOIT.

The village of Musquodoboit, Halifax county, with a farming and lumbering population of about 500, is situated in and around the head waters of Musquodoboit harbour proper, and Petpeswick harbour, which at their extreme heads are only about a mile apart.

In 1901-2, the department expended the sum of $1,183.26 in building a small wharf for the convenience of the inhabitants of the district, and the shipment of lumber, of which some three million feet are annually exported, for the shipping of general farm produce and the loading of fuel and general merchandise. The work consists of a block of cribwork, 51 feet long, 17 feet wide and 14 feet high, with an earth and stone approach 50 feet in width, 80 feet in length and of an average height of 9 feet.

In 1903-4, the sum of $271.39 was expended in completing to its full and proper width the earth and stone bank approach. The total expenditure by the department to June 30, 1904, was $1,454.65.

NECUM TEUCH.

Necum Teuch (pronounced 'Necumtau'), Halifax county, is the name given to the settlement lying on the east side of Necum Teuch bay, at the mouth of Moser's river. It is sixty-eight miles in an airline ENE., from Halifax, and six miles from Salmon river. The population of the place embraces about 400 people, engaged in farming and lumbering. About 2,000,000 feet of deal and hardwood are sawn annually at Moser's river, at the head of the bay. A small coasting steamer makes weekly calls, landing freight and passengers at a detached block of cribwork in the stream, whence they are transferred in small boats to the settlement.

In 1902-3, the sum of $790.13 was expended in commencing the construction of a wharf. The work done for this small expenditure consists of a road approach, about 500 feet in length constructed of earth embankment, and about 70 feet in length of cribwork at the shore end of the wharf.

In 1903-4, the sum of $4,421.45 was expended in completing the construction of the wharf. The work, which is of block and span construction, is 394 feet long and 20 feet wide, with an L on the outer end, giving a face length of 40 feet and a width of 30 feet. The shore block is 41 feet long, following it are seven blocks of 12 feet each, two blocks 19 feet, and the outer block is 101 feet long. Between are ten spans of 13 feet each. All the blocks are substantially constructed of round-log cribwork,

filled solid with stone ballast, and well fendered and bolted. Along the outer face the face is 20 feet high giving about 16 feet of water at high water ordinary spring tides.

Spring tides rise 6 feet, neaps 5 feet.

NEWELLTON.

Newellton, Shelburne county, is situated about two miles north-west of Clark's harbour and has a population of about 350.

A wharf was constructed at this place in the fiscal year 1899-1900, with a view of affording adequate facilities for the several small steamers, which ply along this part of the coast and which, in the past, were unable to land passengers and freight without serious discomfort and difficulty.

The wharf is 238 feet long and consists of a substantial rock-bank approach, 108 feet in length, 30 feet wide on top, 8 feet high at the outer end; two stone-fillled cribwork blocks, each 19 feet in length, separated by a span of 11 feet, and seven pile bents placed 10 feet apart centre to centre. The width of the pile bents and cribwork blocks is 20 feet with a height of 23 feet at the outer end. The cost of this work was $1,999.99.

Owing to the heavy undertow it was very difficult for a vessel to lie inside of the structure which was under an almost constant severe strain.

In the year 1901-2, the sum of $399.59 was expended in repairing the stone approach and sheathing the outer pile-work with 4-inch deals fastened with 9-inch spikes made of ¾-inch iron. This sheathing was, however, inadequate as the ice and waves made slight breaches in it, and the water flowing in and out soon threatened the life of the wharf itself.

During the fiscal year 1903-4, the sum of $235.21 was expended to remedy this defect. The work performed consisted in removing the old sheathing, replacing six bearing piles, renewing two pieces of guard-timber and the exterior stringers, also close-piling seventy feet in length of the outer end with spruce piles, 9 inches at the small end and from 23 to 30 feet in length. Spring tides rise here 9 feet and neap 6½.

NEW HARBOUR.

New Harbour, Guysborough county, is on the southern or Atlantic coast of Nova Scotia, 30 miles to the westward of Canso harbour. It is merely a shallow bay, open to the southeast, at the head of which is the entrance to St. Catherine's river, navigable for boats 5 miles inland.

A contract, entered into in May, 1900, for the construction of a breakwater at Black Point, on the western side of the bay, was completed September 27, 1900.

The breakwater consists of a stone embankment 160 feet in length and 7 feet in average height, between the shore and 'Black Rock,' a stone embankment 89 feet in length and 18 feet in average height, in extension of 'Black Rock,' and 150 feet of cribwork 25 feet in width, with creosoted substructure, and with a talus on the seaward side sloping 1½ to 1 from high water.

The height of the cribwork over 15 feet of its width on the seaward side is 7 feet, and over 10 feet of its width on the inner side 3 feet 4 inches, above extreme high water. The depth, at extreme low water, at the inner and outer ends of the cribwork are respectively 6 and 16½ feet. Spring tides rise 6 feet.

During a southerly gale in October, 1900, the outer section of stone embankment was nearly destroyed, the cribwork was slightly damaged, and most of the stone in the talus on the seaward side of the cribwork was carried away.

In 1901-02, the sum of $3,693.04 was expended in repairing the cribwork, and in strengthening it by placing a second 6-inch covering over the covering of the inner 10 feet; in constructing a concrete wall, 89 feet in length, 12 feet in width, on top, and

10 feet in average height over the remains of the outer embankment, and another concrete wall 75 feet in length, 8 feet in width and 4 feet in average height over 'Black Rock,' and in slight repairs to the inner embankment.

In 1903, the sum of $5,999.77 was expended in repairing 50 feet of the concrete work between 'Black Rock' and the cribwork, by placing concrete where undermining had taken place; in reconstructing about 30 feet of the outer end of the stone embankment between the shore and 'Black Rock,' and in placing a talus of heavy stone (5 to 8 tons) on the seaward side of the outer concrete work and of the cribwork extension.

During the fiscal year ended June 30, 1904, the sum of $741.74 was expended, $475.51 in September and October, 1903, in completing the talus on the seaward side of the cribwork extension and in repairing and strengthening the road (side cutting and embankment) leading to the breakwater, and $205.48 in June, 1904, in placing a second covering over the outer section of the cribwork extension and in repairing and strengthening the stone embankment between the shore and 'Black Rock.'

The total expenditure to June 30, 1904, was $27,905.29.

NORTH INGONISH.

Ingonish (North), Victoria county, is on the north-east coast of Cape Breton Island, about midway between Sydney harbour and Cape North. It is separated from the south bay of Ingonish by a narrow, rocky and precipitous peninsula, over two miles in length.

On December 6, 1899, a contract was entered into for the construction of a breakwater off Archibald's Point, on the north side of the bay, for the purpose of forming a harbour of refuge for fishing boats, and the work was completed on December 20, 1900.

The breakwater is 484 feet long, with an L 77½ feet long, and from 18 feet at the inner to 24 feet wide at the outer end, it is constructed of squared timber, laid close-faced, with creosoted timber substructure, fully ballasted and fendered, the seaward face and end are sheathed and protected by a heavy stone talus.

During 1901-02-03, the stone talus, which was somewhat flattened out by the action of the sea, was raised, at a cost of $2,466.88.

During the fiscal year ended June 30, 1904, the sum of $542.76 was expended in the removal, by submarine blasting, of several large boulders near the outer end of the breakwater, which were a source of danger to vessels or steamers approaching or leaving the breakwater.

The depth of water along the face of the L, at low water springs, is 11 feet. Spring tides rise 4 feet.

The work has proved of great benefit to the fishermen of the district.

The total expenditure on this work to date was $30,558.56.

NORTH RIVER.

North River, Victoria county, empties into the northern arm of St. Ann's harbour, a commodious basin 7 miles in length and about 2 miles wide, with a great depth of water, at the head of St. Ann's bay, on the eastern coast of Cape Breton island.

The wharf constructed by the department at Seymour's Point, on the northern side of the mouth of North river, during 1898-99-1900, extends to 9 feet at low water, and consists of a road approach 64 feet long and 16 feet wide, of a block and span work 63 feet in length and 20 feet wide, with a return of 20 feet at its outer end.

All the bearing and mooring piles in the pile work were to be of creosoted timber, excepting the piles in the three inner bents, which being driven above the level of low water, and considered safe from the attacks of the teredo, were to be of spruce ; but as there was a shortage of creosoted piling in the cargo received, and none could be

obtained in the island, the contractors were permitted to substitute native timber piling for three bents at the inner end, and the difference in cost was deducted from the contract price.

An examination of the wharf, made on January 27, 1903, showed that some of the native timber bearing piles have been cut into by the teredo, and that the rest were much weakened, and in order to make the wharf safe for traffic, until it could be properly repaired, the sum of $45.88 was expended during the fiscal year 1902-3, in placing posts under the pile-caps in the six inner bents of the pilework to take the strain off the damaged piles.

The sum of $900 was voted for expenditure during the last fiscal year, in replacing the native timber bearing piles with creosoted timber, and in renewing the hardwood fender piles. All the necessary materials were obtained and delivered, but owing to the difficulty of obtaining a suitable pile driver the work was not completed by the end of the fiscal year. The amount voted and expended was $689.68.

Spring tides rise 6 feet.

The total amount expended on this work to June 30, 1904, was $3,099.11.

OGDEN'S POND.

Ogden's Pond Antigonish county, is on the western shore of St. George's bay, about 13 miles south from Cape George, and 9 miles north from the town of Antigonish. It is a small sheet of water, about 100 acres in extent, separated from the bay by a sand beach of from 130 to 250 feet in width.

For the purpose of rendering the pond which has a depth of over 10 feet at low water, accessible to boat and small craft, during 1900-01-02, a channel 30 feet wide and 825 feet in length, was cut through the beach and the flat inside, down to a depth of about 1½ feet below low water, and a channel protection work, 350 feet in length was constructed in the northern side of the entrance. The work consisted of a brush and stone embankment, 70 feet long and 8 feet wide on top, with sides sloping ½ to 1 ; a pile, brush and stone work 260 feet long and 10 feet wide, close-sheathed on the seaward face ; and of a round timber cribwork block 20 by 20 feet at the outer end, with creosoted timber substructure and close-sheathed in all outer faces.

On November 11, 1902, during a terrific north-east gale, the brush and stone in the work were washed out by the sea, and afterwards, for a distance of 130 feet, the piles were broken off and washed away, leaving the cribwork block at the outer end, uninjured.

During the fiscal year 1903-4, the sum of $1,449.87 was expended in replacing the damaged pilework for a distance of 150 feet with cribwork, in refilling the balance of the pile-work with brush and stone, and in placing a covering over all, and a further quantity of ballast, about 160 cubic yards, was delivered, to be used in the protection to the channel through the flat, inside of the beach.

Total expenditure up to June 30, 1904, was $5,783.76.

PARKER'S COVE.

Parker's Cove, Annapolis county, is a small indentation on the southeast shore of the Bay of Fundy fifteen miles north-west of Digby Gut, and seven miles north of Annapolis, the county town. The population of the settlement is about 250 people, engaged in farming and fishing.

In 1883-84, the department constructed a small breakwater substantially built of round-log cribwork, stone-filled, 200 feet long, 23½ to 26 feet wide on top, and at the outer end 16 feet high, where at high tide there is a depth of about 11 feet of water.

In 1900-01, the department extended the breakwater a distance of 101 feet, at a cost by contract of $3,749. The new block is 26 feet wide on top, and from 16 to 19 feet high, substantially built of round-log cribwork, filled with ballast, well fendered, close-sheathed on the seaward side and outer end.

In 1901-02, the sum of $73.50 was expended in placing a quantity of large stone on the eastern side of the breakwater, near its outer end, to prevent the waves from undermining the work.

In 1902-03, the breakwater was extended a further length of 130 feet, with an L on the outer end, having a face length of 82 feet. This work, which was built by contract, at a cost of $10,212.60, is from 20 to 29 feet high, the stem 26 feet wide and the L 30 feet wide on top. The landward side batters 1 in 6, while the eastward side is plumb and provided with a solid timber break 4 feet 6 inches high. The work was begun on June 11, 1902, and the whole work thoroughly well completed on November 20, of the same year. The extension is very strongly built of round-log cribwork, filled to the top with stone ballast, well fendered and bolted, and close-sheathed on the seaward face.

In 1903-04, the sum of $1,191.10 was expended in rebuilding the upper 2 to 4 feet in height, by 25 feet in width, of the shoreward end (the older portion of the breakwater) and in protecting the fore-shore on the eastern side of the work with large stone to prevent the sea from undermining the new block.

Spring tides rise about 30 feet.

The total expenditure to June, 1904, was $17,518.24.

PARRSBORO.

Parrsboro' is an important town, of about 2,800 people, situated at the right bank of the Partridge Island river, which empties into the north side of the Basin of Minas.

In 1901 a pier was constructed on the north side of the mouth of the river. It consists of an approach of gravel and clay 25 feet long; a block and span work 140 feet in length; pile work for a length of 170 feet, and a cribwork head 40 feet in length.

Owing to the strong current running through the pile work, vessels could not be moored on the inner side of the wharf.

During the fiscal year 1903-04, the sum of $922.10 was expended in closing the open pile-work with sheathing and also driving 34 fender piles on the outside of the sheathing.

Spring tides rise 40 feet, neap 33 feet.

PEMBROKE.

Pembroke, Hants county, is a small farming and lumbering settlement with a population of about 175, situated on the south shore of Minas Basin, 9 miles east of Cheverie and 3 miles west of Walton. The lumbering industry is represented by the annual shipment of about 3 million feet of deals and from five to ten thousand pieces of piling. As an aid to local business, and a protection to vessels loading and discharging, the department awarded a contract on March 28, 1904, in the sum of $7,970 for the construction of a breakwater. At the close of the fiscal year 1903-04, the work was half completed, the contractors having earned payments to the extent of $4,096.81.

Spring tides rise about 48 feet, neap about 40 feet.

PETIT DE GRAT.

Petit de Grat Inlet, Richmond county, lies between Petit de Grat island and the eastern extremity of Madame island. The main entrance is at the southern end from the Atlantic; the northern entrance, from Rocky bay, is obstructed by outer and inner bars, through which passages for boats at ordinary low water, were opened by the department between 1879-82.

During 1898-99-1900-01, both channels were widened and improved by hand dredging, and a cribwork protection was constructed on the western side of the outer channel.

At the end of June, 1901, the outer channel was about 350 feet long and 25 feet wide, with a depth of 2 feet at low water, while the inner channel was 285 feet long, 20 feet wide, and with the same depth as the outer channel. The protection work, 298 feet in length, consisting of ordinary round timber cribwork, was fully ballasted but not covered.

The sum of $1,000 was voted for expenditure during 1901-2 for the reconstruction of a portion of the protection work and for deepening the channels, but as it was found that the beach on the eastern side of the channel was moving rapidly to the westward, and had already encroached upon the channel, and the amount available was not sufficient to check the movement, the amount was not expended, and it was decided to abandon the old work and to open a new channel to the westward of it.

In 1902-3 the sum of $916.36 was expended in procuring materials for the construction of a protection on the eastern side of the new channel.

During the last fiscal year the sum of $3,022.81 was expended in the cutting of a channel 285 feet in length, 20 feet wide in the bottom and to a depth of 2 feet below low water springs, and in the construction of a protection work on the eastern side of the channel, 200 feet in length, 12 feet wide for a distance of 160 feet, and 20 feet wide for the remaining distance of 40 feet, constructed with round timber, fully ballasted and fendered, the outer end for a distance of 40 feet covered with plank, and the eastern face, the end, and the western face, for a distance of 40 feet from the outer end, close-sheathed with hardwood plank.

Spring tides rise 6 feet.

Total expenditure to June 30, 1904, was $8,363.72.

PICKET PIER.

The Picket Wharf, King's county, so-called, is situated on the south side of the mouth of the Habitant river, two miles below the village of Canning, and at the lower end of the village of Canard. It is conveniently placed with regard to a large and thickly populated area of the richest fruit-growing and agricultural land in Nova Scotia.

The wharf was begun in 1845, and extended in 1859-60, by the inhabitants, aided by the provinical government. Since these dates the department has expended upon it in renewals and general repairs: in 1878, $500; in 1885, $100, and in 1886, $500.

It is 190 feet long, 60 feet wide, and at the outer end, which is now about 5 feet below high water ordinary spring tides, it is 23 feet high. Spring tides rise 48 feet, neaps 40 feet. During the year 1896-97, the sum of $496.88 was expended on some very necessary repairs. The work done consisted of the rebuilding of the crib breakwater along the outer face of the shoreward end for a length of 170 feet, that had fallen into decay and threatened to make an island of the main portion of the wharf. Portions of the top of the wharf were also filled up with stone and gravel, so that teams could come alongside vessels loading potatoes and other produce.

Since 1897, the work had become so dilapidated as to be practically useless for shipping purposes, and in 1903-04 the department accordingly expended the sum of $2,309.65 in beginning the construction of a pile-work pier over and on top of the ancient cribwork structure.

On June 30, 1904, the work was about two-thirds done.

PICTOU LIGHT BEACH.

The beach forming the southern side of the entrance to Pictou harbour, known as Pictou Light Beach, extends about one mile in a northerly direction, inclosing Moodie Cove, an inlet nearly dry at low water, except in a central channel. The outer end of the beach, on which stands a lighthouse and keeper's dwelling, is protected by a breastwork of squared timber, 450 feet in length, and by a work of brush and stone

extending from side to side of the beach, opposite the southern extremity of the breastwork, and inclosing property under the control of the Department of Marine and Fisheries.

In 1894-95, the sum of $300 was expended in acquiring a title to a portion of the beach 1,520 feet in length, adjoining the property of the Department of Marine and Fisheries.

During 1898-99, a brush and stone-work 1,030 feet in length, 10 feet wide and 4 feet in height was constructed along the beach to prevent its wearing away by the action of the seas during gales ; and two groins, respectively 65 and 55 feet in length, composed of piles, brush and stone, were built off the brush and stone-work for the purpose of gathering the sand.

In 1900-01, the sum of $522.77 was expended in the construction of a third groin, 75 feet in length, opposite the end of the breastwork built by the Department of Marine and Fisheries, and 200 feet to the northward of the first groin, and in slight repairs to the brush and stone work ; but the groin completed in November was undermined and destroyed during a heavy easterly gale early in December, 1900.

During 1901-02, the sum of $608.28 was expended in raising the brush and stone work, which had settled, for a distance of 710 feet, and as it was found that the beach south of the end of the work was wearing away, the protection work was extended for a distance of 120 feet. The extension consists of brush and stone-work, 10 feet wide and of an average height of 4 feet.

Spring tides rise 6 feet.

The work for which the appropriation for 1903-04 was intended, viz., the reconstruction of the breastwork at the outer end of the beach, was performed during that year by the Department of Marine and Fisheries.

PINKNEY'S POINT.

Pinkney's Point, Yarmouth county, is a small fishing and farming village of about 150 people, situated near the extremity of the headland between Chebogue river and Little river, a distance of about twelve miles south south-west of the town of Yarmouth.

In 1901-02, the department expended the sum of $998.73 in constructing a small breakwater for the purpose of affording some small measure of protection to the fishing boats, and to serve also as a landing wharf for an occasional schooner load of general merchandise for local consumption.

The work consists of a block of round-log cribwork, 20 feet square, 14 feet high, with an approach 93 feet long, 20 feet wide and from 4 to 13 feet high, built of stone and walled up on each side with split boulders. The outer edge of the cribwork block is dry at low water mark.

In 1902-03, the sum of $48.69 was expended in flooring the block of cribwork 20 feet square, built the previous year, and placing 8 fenders.

In 1903-04, the sum of $68.26 was expended in replacing a large quantity of large stones on the shoreward end and seaward side of the work, which were washed and lifted out of position by heavy waves and ice, during the previous winter.

Spring tides rise 12 feet ; neaps, about 10 feet.

PORT AU PIQUE.

Port au Pique is a thriving farming and lumbering settlement of some 400 or 500 people, situated on the north shore of the Basin of Minas, Colchester county, about eight miles west of Great Village and six miles east of Bass river. Hitherto, in the absence of a wharf, vessels coming to either load or discharge have had to lie aground on the beach where they could be reached by teams at low water. This was a dangerous practice and resulted in the destruction of several vessels in the course of the last few years. To encourage and develop local trade, and for the convenience of shipping,

the department in 1903-04, expended the sum of $543.62 in the purchase and delivery of materials for the purpose of constructing a suitable public wharf of pile-work.

Spring tides rise 50½ feet, neaps, 43½ feet.

PORTER'S LAKE.

Porter's lake is a long and narrow strip of fresh water, lying nearly north and south, situated about the middle of Halifax county, or about fifteen miles east of the provincial capital. It is about eighteen miles in length, from a quarter to a half mile in width, and the water being of good depth for almost its entire length, it is navigable for vessels of about 60 tons, to the extreme head. The normal level of the lake is some 2 or 3 inches above high water ordinary spring tides which, on the coast here, rise 6 feet, and neaps 5 feet.

Up to about 1873 the outlet, which was directly into the Atlantic through a gravel beach, about 200 feet wide, was navigable for schooners drawing 6 feet of water, and a considerable trade was then done on the lake in the export of timber, lumber, cordwood, general farm produce and fish. Since that time the outlet has been gradually and permanently filling up with the accumulation of gravel washed in by southerly and easterly storms. In order to maintain the outlet, to prevent the roads along the margin of the lake from being flooded, and also to admit fish into the lake, the following small expenditures have been made by the department :—

1881-82	$ 200 00
1884-85	200 00
1889-90	200 00
1892-93	147 00
1897-98	100 00
1898-99	200 00
1899-1900	150 00
1902-03	49 99
1903-04	325 15
	$ 1,572 14

These expenditures having resulted in but slight temporary relief and no permament improvement, the department in 1900-01, expended the sum of $2,262.44, in beginning the construction of a permanent channel through the neck of land, 2,400 feet wide, separating the main body of the lake from the extreme head of Three Fathom Harbour. In 1901-2 a further sum of $5,987.24 was expended on the permanent outlet. In 1902-03 the sum of $2,455.67 was expended on the permanent, and $49.99 on the temporary (old) outlet.

In 1903-04 the sum of $325.15 was expended in several times reopening the old outlet.

Total expenditure to date :—

On permanent outlet	$16,705 35
On temporary outlet	1,572 14
	$18,277 49

PORT GEORGE.

Port George, Annapolis county, is a village of some 400 people situated on the south of the Bay of Fundy, 37 miles north-east of Digby Gut, 42 miles south-west of Scott's bay, nine miles south-west from Margaretville, and seven miles north-west from Middleton on the Dominion Atlantic Railway.

Some years before confederation, the provincial government built a western breakwater and an eastern pier or wharf. The breakwater is 440 feet long, from 25 to 35 feet wide on top, and at the outer end, where there is about 21 feet of water at hight water ordinary spring tides, it is 25 feet high. It is built of round-log stone-filled cribwork, the western or seaward face and outer end being closely sheathed.

The wharf on the eastern side of the little harbour is 205 feet long, 20 feeet wide and 18 feet high at the outer end. It is built of round-log cribwork, and the outer end, on which is built a small lighthouse, is closely sheathed. In 1874, the harbour was taken in charge by the Public Works Department, and in that and the following year the sum of $7,000 was expended in repairing and refacing the breakwater, which was much decayed. In the autumn of 1888, the outer end of the breakwater was destroyed by a severe storm, 165 feet in length being wrecked, and an additional length of 30 feet being much injured. Before repairs could be made, a second storm destroyed the damaged portion, leaving 195 feet of the work a complete wreck, and rendering the harbour practically useless.

In 1900-01, the destroyed portion of the work was rebuilt by contract.

In April, 1894, an exceptionally severe northeast gale caused a serious breach in the breakwater at about midway of its length, or immediately shorewards from the new outer block. The breach was 40 feet long for the full width of the work, and about 17 feet high ; it was closed in the autumn of the same year.

In 1900-01, the sum of $400 was expended in repairing the eastern breakwater wharf. The outer 30 feet in length was refloored, and the close-sheathing for the same length was renewed. New fenders, guard timbers and mooring posts were also placed. The sum of $1,653.60 was also expended in the construction of a detached breakwater about 200 feet eastward from the main end of the work. The object of this is to break the seas and afford a much needed shelter to schooners lying alongside the breakwater.

In 1901-02, the sum of $2,297.46 was expended in continuing the construction of the detached breakwater begun the previous year. The work thus extended measured 102 feet long, 32 feet high at the lower end and 26 feet at the upper, 20 feet wide at top. It is plumb on the seaward face and batters one in four on the back.

In 1902-03, the sum of $2,287.46 was expended in beginning the construction of an extension of 100 feet in length of this work.

In 1903-04, the sum of $5,807.95 was expended in completing the breakwater begun in 1901 and in renewing the top of the 200 feet in length of the main breakwater a height of from 3 to 5 feet. The detached breakwater is 200 feet long, 30 feet wide on top and 17 to 32 feet in height. It is very strongly built of round-log cribwork, filled with stone.

Spring tides rise 30 feet.

The total expenditure to June, 1904, is $37,605.46, including a refund to the provincial government in 1887-88, of $1,076.75. This work was transferred to the control of the Marine and Fisheries Department on June 12, 1888.

PORT GREVILLE.

Port Greville, Cumberland county, is a village of about 300 people, situated 12 miles west of Parrsboro. Important shipbuilding and lumbering interests are located at this place, which are mainly dependent upon the security of its harbour.

The harbour is formed by a high gravel bar, lying parallel to the shore, inside of which the river runs for a half mile before reaching low water mark.

For the purpose of protecting this bar, which was threatened with destruction, the department, in 1874, constructed upon it a cribwork wall, 2,200 feet in length, 10 feet wide on top with an average height of 7 feet.

In the fiscal year 1886-87, the department constructed a breakwater off the eastern end of the cribwork wall, for further protection to the harbour. It is 250 feet in length, 21 feet wide on top with an average height of 20 feet and has a slope on

the seaward end of ½ to 1, whilst the seaward face and outer end were sheathed with 6-inch plank, well fastened.

In 1902-03, the beach protection work was rebuilt at a cost of $4,071.10.

During the fiscal year 1903-04, the sum of $697.59 was expended in rebuilding 60 feet of protection work. Spring tides rise 40 feet, neap tides 34 feet.

PORT HAWKESBURY.

Port Howkesbury, Inverness county, is on the eastern side of the Strait of Canso, nearly opposite Port Mulgrave.

The sum of $2,000 was appropriated for expenditure in 1901-2 towards the construction of a wharf. During the year a survey was made and a plan and specification prepared for the reconstruction of a wharf known as the 'long wharf.'

A contract was entered into on September 11, 1902, for the reconstruction of the 'long wharf' for the sum of $9,450.

The work under contract comprises the construction of an abutment 35 feet in length, with end and side walls of stone; the reconstruction from 2 feet above low water of 3,912 feet of block and span work, including 8 cribwork blocks 31 to 38 feet in length and 22 to 24½ feet in width; and the reconstruction and extension of the 'head' including the removal to 2 feet above low water of parts of 2 cribwork blocks and the construction of cribwork and pile 'head' 73 feet 9 inches in line of work by 112 feet.

Construction was commenced April 23, 1903, and satisfactory progress was made up to June 30, the same year, when the new cribwork over all blocks, excepting one, was approaching completion, and when the estimated value of work performed was $2,780.

Operations were continued up to October 19, 1903, when it having been ascertained that ledge rock would prevent the construction of the pile 'head,' a contract was entered into for the removal of cribwork and ballast covering the site of a proposed cribwork 'head' for $2,900.

The work was commenced October 12, and completed November 26, 1903.

Subsequently separate contracts were made for the removal of the outer block of the approach (damaged by ice) for $900, and for the construction of a cribwork 'head' in place of a pile 'head'; the reconstruction of the outer block of the approach, and the construction of a roadway at the inner end for $6,700. Operations were resumed June 13, and were in progress at the close of the fiscal year.

The expenditure during the fiscal year 1903-4 was $8,122.50.

The reconstruction of the 'long wharf' was completed September 19, 1904.

PORT HOOD.

Port Hood, the shire town of the County of Inverness, is on the west coast of Cape Breton island, 20 miles north of the northern entrance to the Strait of Canso.

A pier on the east side of the harbour, commenced by the provinical government in 1865, was originally 550 feet in length and 24 feet in width, with an 'L' on the south side of the outer end, 100 feet in length and 25 feet in width. It came under the charge of the Federal government in 1871, since which time extensive repairs and renewals have been made, including the construction of a new block, 125 by 25 feet, at the outer end, in 1873; the construction of a block 50 by 32 feet at the south end of the 'L' in 1888-89; and the construction of a block 71 by 24 feet at the outer end in 1889-90. The old provinical government work was of square timber, close-faced; the additions and parts reconstructed by the department are of round timber laid open-faced. The piers have been protected on the seaward side, at the outer end, and on the south end and inner side of the 'L,' by close-piling, and on both sides to within 74 feet of the outer end by a stone talus.

In 1902-03, the sum of $199.99 was expended in urgent repairs, including replacing ballast where required and temporary repairs to the covering.

During the fiscal year ended June 30, 1904, the sum of $1,500.01 was expended in repairing and strengthening the outer end of the pier. The work performed included : close-piling (inside) and reballasting the face chambers at the outer end on the seaward side near the outer end; repairing the covering, and renewing the close-piling at the outer end and on the seaward side in places.

The total expenditure to June 30, 1904, including $916.11 refunded to provincial government, was $61,592.20, and $2,078.58 for dredging.

PORT HOOD HARBOUR.

The harbour of Port Hood is on the west coast of Cape Breton island, about 20 miles to the northward of the northern entrance to the Strait of Canso.

The harbour was formerly a secure one, Smith island, which forms its west side, having been connected with the mainland by a range of sand hills. In 1893 the sea made a breach through this protection; the opening, at first narrow, was enlarged by the tidal currents with increasing rapidity until it was entirely swept away. The harbour is now unsafe during northerly gales, except in a small cove on the east side of Smith island.

In March, 1902, a report was submitted on the closing of the northern entrance in which the estimated cost of work suggested varied from $482,000 to $291,000, according to design and location.

During the fiscal year 1903-04, the sum of $2,968.85 was expended in constructing a length of 330 feet, 28 feet wide on top, of a proposed breakwater, and in procuring materials for its construction.

PORT HOWE.

Port Howe, Cumberland county, or Port Philip, as it is commonly called, is situated about four miles west by south of Pugwash, and is a struggling settlement from three to four miles in length with a population of about 500 inhabitants. The chief occupation of these people is farming, although some small interests are engaged in lumbering and fishing.

The site of the wharf is at River Philip Bridge and is located along the flats bordering on the channel and running parallel to it. Much hay, tan-bark, &c., have in the past been loaded here and the necessity of a wharf for the better handling of such commodities was greatly felt.

During the fiscal year 1903-04, the department has constructed a wharf at this place at an expenditure of $1,964.19.

The wharf consists of three blocks of cribwork each 22 feet in length and 20 feet wide on top and three spans, the first being 12 feet and the other two 15 feet in length. The centre span has attached to it another crib 22 feet in length and 20 feet wide which makes that portion of the work 40 feet wide. The height of the wharf at the outer side is 23 feet average, and 14 feet on the inner side. The cribwork is built of round logs filled with stone and well fendered and fastened. Spring tides rise here 7 feet and neap 4 feet.

PORT LA TOUR.

Port LaTour, Shelburne county, is a fishing and farming community, situate 25 miles south-west of Shelburne town, with a population of 700.

The harbour is about four miles long, north and south, and two miles wide, east and west, and has a depth of water of from five to seven fathoms. The tides rise and fall, spring 10 feet and neap 7.

Though the outer harbour, is somewhat exposed to the south-east (this being the quarter from which the most destructive and severe gales arise), the inner harbour formerly afforded some measure of shelter and protection to the northward and westward of the sand-flats, lying between Page's island and Swain's point, on which there is from 6 to 8 feet of water at low water ordinary spring tides. Since, however, an unusually heavy storm, some years ago, tore from these flats, the thick growth of eel-grass, with which they were covered, the undertow now washes over them. Vessels, lying at anchor, awaiting a cargo or favourable wind, are in danger of dragging ashore, and the need of a protected anchorage is therefore unquestioned.

To most effectually meet this requirement, it was necessary to construct a breakwater, starting from Swain's point and running in a north-easterly direction.

The work was commenced during the fiscal year 1898-99, and continued in the years 1899-1900 and 1902-03. At the end of the fiscal year last mentioned, the breakwater had been built on a length of 392 feet, 25 feet wide on top, with slopes of 2 to 1 on the seaward side and 1 to 1 on the harbour side, the height ranging from 10 to 17 feet, and the amount expended was $7,547,79.

The work consists of a stone embankment, with outer and inner walls generally 5 feet in thickness, of large stone, the space between the walls is filled with smaller stone, and the top of the middle part is finished with a layer of good gravel about 9 inches in thickness. On top of the outer wall, a break, generally 2 feet high, is built of cut granite on the whole length of the work.

During the fiscal year 1903-4, the sum of $1,097.64 was expended for the construction of a further length of 40 feet of breakwater, the extension built is 25 feet wide on top and 28 to 30 feet at bottom, 16 feet high at the inner end and 17½ feet at the outer end, or 700 cubic yards of rock work.

The total expenditure on this work, up to June 30, 1904, was $8,645.43.

PORT MAITLAND.

Port Maitland, Yarmouth county, is a prosperous and important fishing and farming village, with a population of about 600, situated on the southeast side of the mouth of the Bay of Fundy, 12 miles north of the county town of Yarmouth.

The harbour works were begun about the year 1859, by the provincial government. They consist of an eastern and western or main breakwater of cribwork. The former is 400 feet long by some 20 feet wide, and the latter 500 feet long, 22 to 25 feet wide, with a return of 54 feet long, 24 feet wide and 27 feet high along which there is a depth of 19 feet at high water ordinary spring tides. These breakwaters or piers inclose between them a snug high-water harbour of 2½ acres in extent.

In 1873-4, the eastern breakwater was raised and widened for a length of 158 feet on the shore end, and an extension of 50 feet in length was built on the outer end of the western breakwater. In 1885-6, the sum of $349.92 was expended in raising the outer end of the eastern breakwater, and in repairing and partly renewing the sheathing of the outer face of the western breakwater. In 1887-8, the western breakwater was repaired and the following year, 1888-89, both sides of the breach were closed up, and a number of fender piles were driven along the outer face and exposed corners of the broken work.

On June 24, 1890, a contract was made for rebuilding the destroyed section and repairing the other parts of the work. The seaward face, i.e., 83 feet in length outside the new work, and 100 feet between it and the shore, was close-piled ; the entire top was rebuilt and new fenders were fitted on the inside face. In 1891-2, the sum of $296.45 was expended in repairing the eastern breakwater, and in 1896-7, extensive repairs and renewals were made to both works. On the eastern breakwater, which also serves as a wharf for the landing and loading of general merchandise, coal, lumber, &c., the shoreward 30 feet was rebuilt on the south side 6 logs high and on the north side 3 logs high, including floor-stringers and flooring ; 22 feet in length of

the new covering was laid on the outer end, and a number of new fenders were bolted into position. On the western breakwater, a re-enforcing block was built on the south side of the outer end, 97 feet long, 11 feet wide and 12 to 14 feet high, or to a height of about 10 feet below the floor of the work ; a re-enforcing block was also begun along the whole length of the L, 70 feet in length and from 10 to 12 feet wide. To obviate settlement, due to soft bottom, and the eating away of the bottom logs by the limnoria, it was built on 147 piles, driven to hard bottom and cut off level with the beach. The inner or north side of the shoreward end was also strengthened and rebuilt. In 1897-8, further repairs and renewals to the breakwater were made, the re-enforcing block along the L of the western breakwater was completed to the full height of the work, and the inner face of the outer end was renewed. The buttress on the outer side was extended shorewards a length of 122 feet. On the end of the eastern breakwater the T was rebuilt 50 feet long, 20 feet wide, and built on 21 piles driven to hard bottom and cut off level with the beach. Various miscellaneous repairs were also effected.

In 1898-9, thorough and extensive repairs to the western breakwater were completed, and 60 feet long on the inner face was close-sheathed, the buttress on the seaward side, 140 feet long was finished and several vacant spaces in the shoreward end were filled with ballast.

In 1899-1900, the re-enforcing buttress on the outer end and seaward face of the breakwater, 96 feet long, 10 to 12 feet wide, to the full height of the work, was rebuilt. The lower 12 feet of this work, and the outer end of the work, were also sheathed with 4-inch creosoted plank as a protection against the limnoria.

In 1900-01, a piece of buttress on the seaward side of the breakwater, 90 feet long, 19 to 20 feet high, and from 10 to 11 feet wide, adjoining shorewards the piece 96 feet long which was built the previous year, was constructed. The outer face of the new piece of buttress was also sheathed 12 feet high with creosoted 4-inch plank, as a protection against the limnoria.

In 1901-02, the sum of $299.44 was expended in close-sheathing with 5-inch plank a length of 110 feet of the shore end of the seaward face of the breakwater from which the old sheathing had been stripped away by heavy seas earlier in the year.

In 1903-04, the sum of $1,503.25, was expended in raising to the full height of the breakwater, the buttress on the seaward side for a length of 65 feet and a width of 12 feet, and height of 14 feet. Also the taking down, rebuilding of an equal length 65 feet, to a height of 8 feet, of the main portion of the breakwater that was very much decayed.

The total expenditure to June 30, 1904, was $27,005.01, including a refund of $1,971.66 to the provincial government in 1887-88. This work was transferred to the department of Marine and Fisheries on June 22, 1885.

Spring tides rise 18 feet and neaps 15 feet.

POULAMOND WHARF.

Poulamond, Richmond county, is situated on Madame island, on the southern side of the Lennox passage, a strait separating Madame from Cape Breton islands, and conecting St. Peter's bay with the Strait of Canso ; and is about one mile to the westward of D'Escousse.

During 1892-3-4, a wharf was constructed consisting of a stone approach 315 feet in length and 16 feet wide, a stone embaukment 107 feet long and 20 feet wide on top, with sides and outer end sloping 1½ to 1, and a creosoted pile extension 120 feet in length and 22 feet wide with an 'L' 21 by 29 feet, at the outer end. The approach to the wharf was deepened by dredging.

During 1895-6, a landing slip was cut on the western side of the outer end of the pile extension to facilitate landing and shipping during low water.

The sum of $334.97 was expended during the fiscal year 1903-04, in renewing the covering, the cap, and eight fender piles on the pilework ; in raising, grading and draining the approach, and building a small warehouse on the L.

The depth at the outer end of the wharf is nine feet at low water spring tides which rise 6 feet.

Total expenditure on this work up to June 30, 1904, exclusive of the cost of dredging is, $6,085.15.

PROSPECT.

Prospect, Halifax county, is a settlement of some three or four hundred people, situated on the Atlantic coast, 15½ miles in an airline southwest from Halifax, 21 miles by public road and about the same distance by water. The land in the neighbourhood being very sterile and rocky, and quite unsuited to agriculture, the inhabitants are wholly dependent for a livelihood upon fishing, which is an important industry, large quantities of lobster, cod, haddock, mackerel, herring and other fish being caught and exported. The cove, around which the village is built, and which carries a depth of from 10 to 15 feet of water at low water ordinary spring tides, is a quarter of a mile long and from two to three hundred feet wide. Its mouth is well protected from the open sea by Saul's island and by numerous reefs and shoals, so that heavy seas cannot enter. Around the cove are numerous small, flimsy wharfs and stages, for the landing and curing of fish, but not only is there insufficient depth of water at these stages, but, belonging to private individuals, merchants and the general public importing flour, coal and other merchandise, have in the past been obliged to unload their goods from schooners lying at anchor in the harbour, into boats and get them ashore as best they could.

In the fiscal year 1902-03 the department expended the sum of $767.26 in the construction of a small wharf of pilework.

In 1903-04, the department expended the sum of $453.62 in completing the work. It consists of a pile-wharf, 61 feet long by 25 feet wide with an 'L' giving a face length of 55 feet. At the outer end, which is 18 feet high, there is a depth of about 10 feet of water at low water ordinary.

Spring tides rise 6 feet, neaps 5 feet.

RAGGED HEAD.

Ragged Head, Guysboro county, on the north side of Chedabucto bay, 6 miles east of Guysboro harbour, is a triangular sheet of water with an area of about 180 acres and a depth of from 2 to 5 fathoms. It is inclosed by shingle beaches, through which there is a narrow channel on the western side of Ragged Head.

During the years 1878-83, the channel was improved and protection works, consisting of 110 feet of cribwork and 428 feet of brush and stone work, were constructed on the southern side. In 1899-1900 and 1900-01 small amounts were expended in repairing the cribwork and in deepening and re-opening the channel.

In 1902-03, the sum of $1,000 was applied in constructing a cribwork block 49 feet in length, 16 feet in width on top, and 11 feet in height, in extension of the channel protection work and in re-opening the channel.

During the fiscal year ended June 30, 1904, the sum of $200 was expended in improving the channel by hand dredging.

The total expenditure to June 30, 1904 was $6,344.97.

The surface of the pond is 3 feet higher at low water inside than low water outside ; consequently there is a fall at low water of 3 feet in the length of the channel (600 feet). The depth in the channel at low water is about 3 feet, except near the entrance, where it is about 1 foot.

RED HEAD.

Red Head, Shelburne county, is situated about two miles west of Roseway and twelve miles south-west of Shelburne. It is a fishing station of some considerable importance.

At this place a beach of shingle about half mile in length separates a small lake from the sea-shore. In former years, a channel existed across the beach, through which the fishermen could enter the lake for protection and shelter.

About the year 1840, the provincial government undertook to prevent this channel from being filled up, and built a small groin of stone-filled cribwork along the western side of the channel from the lake to within 40 feet of low water ordinary spring tides outside. This work was not successful and about the year 1855 the channel was entirely closed.

Examinations and surveys of this place, showed it to be necessary, in order to effect a permanent haven, that the channel should be reopened, and cribwork protection walls be constructed along both sides of the channel, for its entire length.

During the fiscal year 1899-1900 this, together with the excavation necessary for a proper channel, was performed at an expenditure of $2,097.87.

The work done consisted of, the excavation for the channel 306 feet long 20 feet wide and from 4 to 8 feet deep, and the construction of two cribwork walls. The western wall is 316 feet in length, 10 feet wide on top and had an average height of 9 feet, whilst the eastern wall is 266 feet in length 10 feet wide on top, and of an average height of 9 feet.

During the fiscal year 1903-04, the sum of $400 was expended, in extending the western wall an additional length of 60 feet. This addition was constructed of a similar kind of cribwork as the former works, it is 10 feet wide on top, 12 at the bottom and has a height of 10 feet. This extension was found necessary owing to the beach having shifted somewhat and the channel was fast becoming filled up. About 100 cubic yards of small stones and gravel were removed from the channel. Spring tides rise 7 feet, neap 5½.

SANDY COVE.

Sandy Cove, Digby county, is a thrifty and beautifully situated fishing and farming settlement, of some 400 people, situated on Digby Neck, nineteen miles south-west of Digby town.

On February 12, 1903, a contract in the sum of $13,000, was awarded by the department, for the construction of a breakwater in the cove, on the eastern, or Bay of Fundy side of the neck, with the object of affording some much needed shelter to the fishing fleet. On June 30, 1904, the value of the work done was $9,232.

The breakwater, when completed, will be 211 feet long, 30 feet wide on top and 31 feet high at the outer end where, at high water ordinary spring tides there will be about 27 feet of water. The work is designed to be of solidly built round-leg cribwork, the lower portion, up to 5 feet above low water ordinary spring tides, being of creosoted timber to resist the attacks of the limnoria, which are here prevalent and destructive.

Spring tides rise 23 feet, neaps 19 feet.

SCOTT'S BAY.

Scott's Bay, King's county, is on the south side of Minas channel, Bay of Fundy, between Cape Split and Baxter's harbour. The population of the settlement, within a radius of a couple of miles is about 500.

In 1878-79 the department built a block of cribwork 50 feet long, 30 feet wide and about 20 feet high, connected with the shore by a double row of close-piling, 210 feet

long, from the south-east corner of the block ; the cribwork was built of close-faced work, well fendered and ballasted. The work was located on the west side of Jess creek, and formed a harbour or shelter for vessels during south-west storms.

As it had no floor, much of the ballast has been removed, presumably for ballasting schooners. Both the block and close-piling are more or less dilapidated ; 30 feet in length of the close-piling and the upper 15 feet in height of the block being totally destroyed. The expenditure on this block and the close-pile work by the department in 1867-1882 was $3,000.

In 1900-01 the department expended $500 in building two blocks of cribwork, one on either side of the mouth of the creek. The northern block is 115 feet long, 15 feet high and 19 feet wide; also in extending the south breakwater by a block 75 feet long, 10 to 12 feet high and 12 feet wide. Some minor repairs were also made to the older portions of the northern breakwater.

In 1903-04 the department expended the sum of $1,346.52 in further improvements. The work done consists of the construction of a new block of cribwork in extension of that built in 1901-02, 57 feet long, 20 feet wide and from 16 to 21 feet high, also in raising to full height and finishing the new block on the south side of the creek begun in 1901-02.

On June 30, 1904, the work was not completely finished owing to the difficulty, in commencing work early in the season.

Spring tides rise about 48 feet, neaps 40 feet.

SHAG HARBOUR.

Shag Harbour, Shelburne county, is a scattered village of about 600 inhabitants, on the Atlantic coast, about 6 miles north-west of Barrington and about 45 miles south-east of the town of Yarmouth. The occupation of the people is chiefly fishing and but little farming. In the year 1899-1900, the department commenced the construction of a wharf at this place. The sum of $1,950.93 was expended but the structure was not completed.

During the fiscal year 1903-04, the wharf was completed with an expenditure of $337.63.

The wharf consists of a rock-bank approach, 53 feet in length, 25 feet wide on top and 10 feet high, the wharf proper is 221 feet in length, 20 feet wide, with an L or return 20 feet by 20 feet, the height at the outer end is from 19 to 20 feet. It is constructed of pile-trestle bents, 10 feet apart from centre to centre of piles, well braced, waled and fendered.

Spring tides rise here 10 feet, neaps 7.

SOUTH GUT.

South Gut, Victoria county, is the local name for the southern arm of the head of St. Ann's harbour, at the head of St. Ann's bay, on the eastern coast of Cape Breton island.

A wharf was constructed during 1890-91 on the southern side of South Gut, 198 feet in length and 20 feet wide, extending to 6½ feet at low water, and consisting of a shore abutment 48 feet long and of four 20-foot blocks, built of native timber cribwork with intervening spans 17½ feet in length.

In order to render the wharf accessible, at all times of tide, to the steamer which calls here twice a week on her trips from the Sydneys to the north shore, and at the same time to facilitate team traffic on the wharf, during the fiscal year 1902-03, an additional block, 20 by 40 feet was placed, 20 feet from the end of the wharf, and connected with it by a span. The depth of water at the outer end is now 8 feet at low water spring tides, which rise 6 feet.

During the fiscal year 1903-04, the covering, the cap and the fenders on the old wharf were renewed, and the approach was graded and gravelled, at a cost of $493.21.

Total expenditure to June 30, 1904 was, $3,999.27.

SOUTH INGONISH.

Ingonish Bay, Victoria county, is situated on the eastern coast of Cape Breton island, about midway between Sydney harbour and Cape North. It is divided into north and south bays by Middle Head, a narrow, rocky neck of land over 2 miles in length.

At the head of South bay there is an extensive lake, separated from the sea by a beach, through which there formerly existed but a shallow channel.

In 1873, works were undertaken by the department for the improvement of the channel. On their completion in 1876, there was a channel 200 feet in width, with a depth of nowhere less than 14 feet, at low water, and with its northern side protected by a pier 500 feet in length, thus giving vessels access to the lake, which has an area of about 400 acres and a great depth, and affords a safe and commodious harbour.

The pier, on which small sums were expended every year from 1876 to 1880, and large amounts in 1881 and 1882, sustained serious damage during heavy easterly gales in 1882 and was subsequently carried away down to below low water.

In 1886-87 an anchor and mooring buoy were placed in the harbour, near the entrance, and a beach protection work 58 feet in length and 20 feet in width was constructed on the northern side of the entrance, to prevent the sea from cutting away the end of the beach, and open up a channel between it and the remains of the old breakwater ; during 1894-95, a breach at the back of the beach protection work was closed with a cribwork block 45 feet in length and 15 feet in width, and brush and stone placed at its sides.

In 1893-94 a public wharf was constructed on the northern side of, and near the entrance to the harbour, consisting of a block of cribwork 31½ feet wide on top and 30½ feet in length, with an approach of brush and stone, 45 feet in length and 20 feet wide. The depth of water at the outer end at extreme low water is 8½ feet.

During a severe gale, accompanied by an extraordinary high tide, on February 4, 1895, the beach separating the harbour from the bay was swept from end to end. Nearly all the buildings and private wharfs were destroyed and carried away, but the public works were not disturbed, with the exception of some settlement in the slope on the seaward side of the beach protection work.

Since the destruction of the breakwater in 1882, the channel has been gradually contracting and getting shoaler but it is still some 70 feet in width and has a depth of 12 feet at low water. Spring tides rise 4 feet.

On February 28, 1903, a contract was entered into for the sum of $2,485, for the construction of a wharf on the southern side of the harbour, near its entrance. The work was commenced on September 4, and brought to a satisfactory completion on October 21, 1903.

The new wharf is 160 feet in length, extending to 16 feet at low water, and consists of a shore abutment and four cribwork blocks, with intervening spans. The abutment and the three inner blocks are 16 feet wide, and the outer block, which forms the head, 30 feet by 30 feet, all are constructed of round timber, laid open-faced, and the outer block has a creosoted timber substructure and is close-sheathed on all outer faces.

The total expenditure to June 30, 1904, for work at this place, not including cost of new wharf, was $93,696.31. The expenditure during 1903-04, was $2,590.

SPRY BAY.

Spry Bay, Halifax county, is a thriving fishing and farming settlement of about 1,000 inhabitants, situated about seventy miles east of Halifax city and eight miles west of Sheet Harbour. It contains four stores, two lobster packing factories, hotel

and telegraph. The harbour is free from ice all the year round, and, during the winter, freight for Sheet Harbour and points east, has to be landed here on account of the other adjacent harbours being closed by ice. There is a considerable trade all the year round. Hitherto, owing to the absence of a suitable landing pier, the weekly steamer has been obliged to tie up at a flimsy and inconvenient landing, which, owing to shallow water, is approached with difficulty.

In 1903-04, the sum of $508.94 was expended in the purchase and deliverey of the timber preparatory to the construction of a suitable wharf.

Spring tides rise 6 feet, neaps 5 feet.

SWIM'S POINT.

Swim's Point, Shelburne county, which is practically a continuation of Clark's harbour, is situated, one and and one half miles east of the last named place.

The wharf at this place consists of a stone approach, 35 feet in length, 25 feet wide on top with a graded covering of 6 inches of coarse gravel, and 178 feet in length of alternate block and spans. The wharf is 20 feet wide except the last 25 feet of its length which is 40 feet wide, forming an L at the outer end. The height of the outer end of the work is 25 feet, the flooring being 4 feet above high water ordinary spring tides.

The people of Clark's harbour have been desiring the ss. 'Senlac,' which plies between St. John and Halifax and intermediate ports of importance, to call here ; but the wharf was too small to accommodate such sized steamers.

During the fiscal year 1903-04, the sum of $1,214.56 was expended for the construction of part of an additional length of 25 feet to the existing wharf. On June 30, about two-thirds of the new work had been built and the necessary materials to complete it were on hand. The new work when completed will be 40 feet wide and 25 feet long with a height at the outer end of 29 feet. It is built of cribwork similar in character to the former work. The depth of water at the outer end will be 4 feet greater than formerly. Spring tides rise here 10 feet, neaps 7 feet.

SYDNEY QUARANTINE STATION.

The Quarantine Station in Sydney harbour is on the southern arm, near Keating Point and about three-fourths of a mile from Point Edward, at the extremity of land lying between the south and west arms.

The wharf built by the Department of Marine and Fisheries and repaired and extended in 1903-04, is a block and span structure, extending 148 feet to 8 feet at low water. Spring tides rise 5 feet.

During the fiscal year 1903-04, the sum of $1,566.04 was expended in procuring creosoted timber and other materials for the repairs and extension of the wharf.

TANCOOK.

Big Tancook, Lunenburg county, is the largest of a host of small islands in Mahone bay, on the coast of Lunenburg county. It is about 2½ miles in extreme length, north and south, by about a mile in width, east and west. It is nine miles north-east of the town of Lunenburg; the same ditance south-east from Chester and about 2½ miles south-west of the Aspotogon peninsula, which is the nearest mainland. The island has a population of about 600 people, for the most part dependent on fishing, but doing a considerable amount of farming in the way of raising early vegetables.

The breakwater, which is situated on the north-western side of a large cove, on the northern end of the island, was built in 1873, at the joint expense of the Department of Public Works and the provincial government, each having expended $2.000. It is 200 feet long with a spur at the outer end, having a face length of 95 feet, and is

built partly of piles and partly of cribwork, the first 165 feet being of cribwork, and the remainder including the spur or L of piles. In 1887-88, repairs and renewals were effected. 1899-1900, thorough repairs and renewals to the cribwork portion of the structure were made.

In 1901-02, the department expended the sum of $936.48 in completing the repairs to the wharf begun last year. The work done consisted of the renewal of the pile-work in the outer portion of the wharf and the reflooring of the whole outer end of the L.

In 1903-04, the sum of $195.99 was expended in driving 35 new piles to replace those broken by ice the previous winter, the placing and bolting of 47 running feet of waling, 55 feet in length of new guard timbers, and sundry repairs to planking.

TENECAPE.

Tenecape is a scattered farming district on the south shore of the Basin of Minas, Hants county, situated about half way between Walton and Noel, or about 6 miles distant from each. The population of the place within a radius of a couple of miles is about 200 people. A small lumbering industry ships about 300,000 feet of lumber annually. A small amount of fishing is also done. The nearest railway station is distant about 13 miles. Most of the local trade is carried on by water. The nearest wharf is about 6 miles distant, and hitherto, vessels loading and discharging had to ground on the mud flats at the mouth of the river, where they were much exposed to seas from a northern direction. On May 17, 1904, the department awarded a contract in the sum of $8,370, for the construction of a suitable breakwater to serve both as a landing pier and a shelter. On June 30, 1904, work to the value of $2,019.48 had been accomplished.

Spring tides rise about 50½ feet, neaps 43¼.

TIVERTON.

Tiverton, Digby county, is a village of some 400 people mostly engaged in fishing, but doing also some little farming, situated on the west side of Petit Passage, separating the main line of Digby Neck from Long island. It is about 30 miles south-west of Digby town, and 10 miles from Sandy cove.

On February 12, 1903, a contract (No. 4543) in the sum of $17,000 was awarded by the department for the construction of a breakwater to afford shelter to the fishing fleet. The work, which was completed in January, 1904, is 281 feet long, 30 feet wide on top, and at the outer end 33 feet high, where at high water ordinary spring tides, there is about 29 feet of water. The whole is substantially built of round-log cribwork, the lower portion up to 5 feet above low water ordinary spring tides is of creosoted timber to resist the attacks of the limnoria.

The sum of $119, was paid to the contractors on 'extras,' viz., $50 for carrying floor of the breakwater out over the lower end of the inclined slip, and $60 for treating the upper timbers with creosote.

Spring tides rise 21 feet.

At the end of the fiscal year, the sum of $15,308 had been paid to the contractor.

TRACADIE.

Tracadie Harbour, Antigonish county, is on the southern shore of St. George's bay, 12 miles east from the entrance into Antigonish Harbour, and 11 miles to the westward from the northern entrance to the Strait of Canso. It is separated from the bay by a series of islands and connecting beaches of sand and gravel, and its entrance was formerly to the westward of Delorey island, by a narrow and crooked channel with 2 feet at low water ; but in 1863 the provincial government opened a passage

by dredging at the eastern end of the harbour, through a beach which connected the mainland with Delorey island and constructed a breakwater on its eastern side.

During 1874-75 the department repaired and extended the breakwater, and constructed a retaining wall of cribwork to the southward of it to prevent erosion of the bank. Slight repairs were made from time to time up to 1884-85, when the breakwater was repaired and strengthened by close-piling, and the retaining wall, which had been destroyed, was reconstructed.

The breakwater, weakened by the ravage of the teredo, was badly damaged in 1889, and in the following year, the whole of it, excepting a portion of the south face, 67 feet in length, was destroyed. During 1892-93, 50 feet of the south face of the remaining portion was repaired and strengthened by close-piling.

The destruction in 1890, of the greater portion of the breakwater, involved the shifting of the channel at the entrance (originally carrying 6 feet at low water) 500 feet to the westward and the wasting away of the beach, and consequent loss of land to the eastward by erosion.

To prevent further loss of land and to improve and protect the entrance, during 1898-99-1900, the remaining portion of the old breakwater was repaired and strengthened and a side extension 100 feet in length, consisting of round timber cribwork, with creosoted timber substructure, and close-sheathed on the seaward faces, was constructed.

During 1901-02-03, the retaining wall was re-ballasted, and a cribwork 'spur,' 40 feet long and 16 feet wide on top, close-sheathed on all outer faces, was built at its southern end, to deflect the tidal currents off the bank into the channel.

The sum of $381.64 was expended during the year 1902-03 in raising, ballasting and covering 52 feet of the shore end of the breakwater, in covering the retaining wall 187 feet long and 10 feet wide with spruce poles, and in sheathing the outer face of the retaining wall for a distance of 30 feet from its junction with the 'spur.'

The reconstruction of the breakwater has had the effect of restoring the beach to the eastward, nearly to its original condition, and of deepening the channel at the entrance.

During the fiscal year ended June 30, 1904, the sum of $425.28 was expended in the reconstruction of the inshore end of the breakwater for a distance of 45 feet, in close-sheathing the new work and 15 feet of the old work adjoining it, and in placing brush and stone in the angle formed by the inner end of the work and the clay bank, to prevent the sea from cutting through.

Total expenditure to June 30, 1904, including $1,228.69 refunded to provincial government, and cost of dredging is $25,364.95.

UPPER PORT LA TOUR.

Upper Port La Tour, Shelburne county, is a small village of about 300 inhabitants, situate two miles north-east of Port La Tour proper.

In the fiscal year 1898-99, the department commenced the construction of a wharf which was completed in the next fiscal year. The total amount expended upon this work in these two years was $2,699.85.

The wharf was 273 feet long and 20 feet wide. It was made up of a rock-bank approach 38 feet long and 25 feet wide, eight 18-foot cribwork blocks and seven 13-foot spans, with a common width of 20 feet and a height at the outer end of 18 feet. The cribwork blocks are built of round-logs, filled to the underside of the floor stringers with heavy stone ballast, well fastened and heavily fendered.

Since its construction, this wharf has been much used, and as several coasting steamers called there, it was deemed necessary to extend the wharf to deeper water so that it could be approached by these steamers at practically any time of tide.

During the fiscal year 1903-04, the sum of $800 was expended in the construction of an extension to the wharf, 37 feet long, consisting of a span of 15 feet and a block 22 feet in length by 20 feet wide, also a span and a block of the same dimensions forming an L at the outer end, thus making the outer face 57 feet long. The crib is of the same nature as that previously built.

The height of the work at its outer end is 22 feet.

WASHABUCK CENTRE.

Washabuck, Victoria county, is a district on the south side of the eastern end of St. Patrick's channel, an arm of the Little Bras d'Or lake, and extends about six miles along the shore. As the name implies, Washabuck Centre is situated near the centre of the district.

In order to facilitate the shipment of agricultural produce and cattle, from the district, on April 6, 1903, a contract was entered into for the sum of $5,860, for the construction of a wharf at this place.

The work of construction was commenced on July 1, 1903, and was brought to a satisfactory completion on September 9, following. It consists of a block and span wharf, 218 feet in length, extending to 12 feet at low water, 20 feet wide, with an L at the outer end 20 by 20 feet ; and of a road to connect it with the public road, 102 feet long, on the centre line, and 20 feet wide, fenced in on each side. The blocks and the shore abutment are constructed of round timber cribwork, laid open-faced, with creosoted timber substructure, and the two outer blocks are protected by close-sheathing on their outer faces.

Expenditure for the fiscal year 1903-04, was $6,055.

WEDGE POINT.

Wedge Point is the southern extremity of the peninsula called 'Tusket Wedge,' three miles long, north and south, by half a mile to a mile wide, east and west, situated some ten miles south-east from Yarmouth, the county town. The population of the peninsula comprises some 500 people, the majority being engaged in, and more or less dependent upon, the fisheries. On the east side of the peninsula there was no shelter or protection whatever for the fishermen, of whom there are a considerable number, and they were obliged to keep their boats in Goose bay, on the western side.

In 1902-3, the sum of $1,000 was expended in commencing the construction of a breakwater. The work was 119 feet long, 19 feet wide and from 5 to 12 feet high; it is substantially built of round-log cribwork, well-fendered and ballasted and close-sheathed on the seaward side.

In 1903-04, the sum of $1,701.61 was expended in building an extension to the breakwater built in 1902-03. The new block is 100 feet long, 19 feet wide on top and from 12 to 15 feet high, well and substantially built of cribwork, sheathed on the seaward side and filled solid with stone.

Total expenditure by the department to date was $2,701.61.

Spring tides rise 12 feet; neaps, 10 feet.

WEST BACCARO.

West Baccaro, Shelburne county, is about three miles west of the village of Port La Tour, and has a population of about 400, mostly engaged in the fishing industry. It is one of the roughest spots on the coast of Nova Scotia. In the past the fishermen have pursued a very hazardous calling, and have been handicapped by the lack of a safe mooring harbour for their boats, often having to stand on the shore and watch their boats and other property being destroyed by the storms. To lessen the dangers of their calling and obviate further loss, the department decided to convert a pond

partly available at low tide into a boat harbour by the construction of protection works around it on its exposed sides and excavating a channel on the inner side, to be protected so as to prevent its filling in again.

With this object in view, the sum of $1,999.99 was expended in the year 1902-03.

During the fiscal year 1903-04 the work was completed with an additional expenditure of $3,500.

The work consists of a cribwork protection on a length of 1,055 feet, 8 feet wide on top and from 4½ to 12 feet high. It is built of round logs, filled with stone, double fendered every 10 feet. A channel was also made from inside the pond to low water ordinary spring tides outside, a distance of 225 feet, on a width of 25 feet and a depth of 3 feet.

Spring tides rise 9 feet, and neaps, 7 feet.

WEST BAY (SOUTH).

West Bay (south), is situated on the south side of West bay, the south-western arm of the Great Bras d'Or lake.

'The Points,' so called from the number of headlands projecting into the south side of West Bay, is a scattered settlement, extending along the shore for a distance of four miles, and the centre of the settlement is about twelve miles eastwardly from West Bay port, at the head of the bay, and fifteen miles northerly from St. Peter's canal.

A contract was entered into on September 1, 1903, for $2,980 for the construction of a wharf at 'The Points,' it is to be 250 feet long, 20 feet wide, with the outer end in 12 feet at low water.

Work was commenced on June 13, 1904, and up to the end of the fiscal year, all the bearing and mooring piles were driven and capped, the outside floor-stringers were placed and secured, the outer twelve bents were braced, and the cribwork abutment was placed and partly ballasted.

Expenditure, $1,747.98.

The work was completed and accepted on July 26, 1904.

WESTERN HEAD.

Western Head, Queen's county, is a fishing settlement, situated on the south side of Liverpool bay, about four miles south of Liverpool.

In 1887, the department began the construction of a stone breakwater, and during the following year completed the same. The breakwater was constructed entirely of large stones, quarried for the purpose ; a portion of the work, from low water mark, being built of selected stone, firmly bolted together with iron dogs. The whole work at that time was 190 feet in length and 40 feet wide on top.

Soon after the breakwater was completed, 100 feet in length of the outer end was destroyed, and in the following fiscal year, 1889-90, the sum of $5,000 was expended in rebuilding it. The projecting points of the reef were cut away, a bed was prepared for a foundation course, which was built down to the bed-rock, and the interstices were filled in with Portland cement concrete. Each succeeding course was laid in a similar manner. The top of the breakwater for 5 feet above high water and the surface were finished smooth. The total length of the breakwater built in that year was 106 feet, making the breakwater 196 feet in length over all.

During the fiscal year 1898-99, the sum of $965 was expended in repairing this work. The older portion of the breakwater, 90 feet in length, 29 feet wide, with an average height of 8 feet, was practically rebuilt, and also material repairs were made to the newer work built in 1889-90.

During the year 1902-03, the extension of this work was begun and the sum of $2,960.05 was expended. During the fiscal year 1903-04 an additional sum of $3,653.85

was expended in completing the extension, making a total expenditure in the two years of $6,614.20.

The extension is built of very large stone for a thickness of 6 feet on both sides, and slightly smaller ones in the centre, all laid in cement. It is 97 feet in length, averages 13 feet in height and is 23 feet wide on top and 28 on the bottom. Spring tides rise here 7 feet, neaps 5 feet.

WEST PUBNICO.

West Pubnico Harbour, Yarmouth county, is situated some 30 miles south-west of Yarmouth ; it is about 8 miles long from mouth to head, lying due north and south, and from three-quarters to a mile and a half wide.

On the west side of the harbour and about 3 miles above its mouth, a wharf was built by the department in 1885-6 to 1886-7. The work consists of a stone and gravel causeway, 285 feet long, followed by a wharf 230 feet long, of pile bents. The bank is 25 feet wide by an average height of 4 to 5 feet ; the wharf is of the same width and from 10 to 14 feet high. At low water ordinary spring tides the mud flats are bare for over 1,000 feet beyond the end of the wharf.

In 1900-01 the sum of $2,025 was expended in repairs and extensions, the work done being as follows :—

(a) The raising and gravelling of the stone approach, 290 feet in length ; many of the top stones, which had been displaced, were renewed, and from 6 to 18 inches of fresh gravel was laid.

(b) The thorough repair of the older portion of the work, comprising new fender-piles, guard timbers and transverse bracing. The whole of the floor was taken up and relaid, about one-half of it with new plank.

(c) The construction of an extension 167 feet long of equal width and similar construction with the old work, viz.: 25 feet wide and of pile-bents. The outer end of the work, which is all of pile-work, is now 15 feet high, carrying a depth of water of about 12 feet at high water ordinary spring tides.

(d) The placing of three dolphins, consisting of 4 piles each, from 500 to 1,200 feet distant from the wharf to mark the positions of rocky ledges. The piles forming each dolphin are strongly chained and bolted together at the top and painted.

The total length of the pile-work is now 397 feet.

In 1903-04 the sum of $98.12 was expended in lowering back into place about 50 feet in length of the shore end.

Spring tides rise 12 feet, neaps 10 feet.

Total expenditure to June 30, 1904, was $4,371.75.

WEST WOODS HARBOUR.

West Woods Harbour, Shelburne county, is a small village of about 200 people situated about 2 miles direct west of Middle Woods Harbour. The people here had no means of landing their goods and had to drive about 6 or 7 miles to the nearest shipping place for their provisions and other necessities. During the fiscal year 1903-04, the department expended the sum of $686.93 in partially constructing a wharf there, which would have been completed but for the difficulties in procuring materials and the high cost of transportation of same.

When completed the wharf will consist of a rock-bank approach 18 feet in length, two cribwork blocks each 20 feet long and two spans of 15 feet each, making a total length of 98 feet. The rock-bank is 24 feet wide, and 9 feet high at the outer end and the cribwork is 20 feet wide and 16 feet high, at the outer end. The work is completed with the exception of about 6 feet in height of the outer block and the putting in position of the top of the outer 35 feet in length of the work. When completed

the outer end of the wharf will stand on the edge of the channel and will be easy of approach both by land and water. Spring tides rise here 10 feet and neaps 7 feet.

WHITE HAVEN.

White Haven, Guysboro' county, one of the finest harbours in Nova Scotia is on the south or Atlantic coast, fourteen miles to the westward of Cape Canso.

In 1854, the residents, with some aid from the provincial government, undertook the construction of a canal for boats through a low and narrow isthmus between Marshall Cove, three miles within the entrance, and Witch Cove, at the eastern extremity of Tor bay. On the completion of improvements made in 1876, it was 620 feet in length and from 10 to 12 feet in width; the bottom was about one foot above extreme low water, or 4 feet 6 inches below the level of extreme high water. Prior to 1884 the walls had become dilapidated, the southern entrance was blocked with sand, and the channel inside filled with sediment and washing from the slope.

In 1894-95 repairs and improvements were made by the department with the object of obtaining ultimately a uniform depth at extreme low water of one foot and a width between retaining walls of 12 feet. The repairs and improvements effected included the removal of 160 feet of old retaining wall on each side at the south end, and the construction of walls 10 feet wide on top, of which 20 feet at the outer end on each side are of cribwork, and the remaining 140 feet of brush and stonework; temporary repairs to the retaining walls on both sides from 160 to 270 feet from the south end, and on the east side from 328 feet to 480 feet from the south end; the construction of new walls on each side from 480 to 500 feet from the south end as foundations for bridge abutments, built by the municipality; the reconstruction of 100 feet of wall on the west side 500 to 600 feet from the south end ; the construction of 141 feet of temporary wall on each side (600 to 741 feet from the south end), and deepening from end to end to within 3 to 6 inches of extreme low water.

In 1900-01 and 1901-02 the sum of $2,686.53 was expended in continuing the repairs and improvements undertaken in 1894-5. The work performed comprised the construction of 137 feet of brush and stone retaining wall on each side, 160 to 297 feet from the south end, the removal of the old retaining wall on the west side, 528 to 740 feet from the south end; and on the east side 588 to 740 feet from the south end ; the construction of a new retaining wall 583 feet in length on each side 167 to 750 feet from the south end and deepening between the retaining walls to about 1 foot at low water.

In 1902-03 the sum of $799.25 was expended in constructing 80 feet of brush and stonework on each side 750 to 830 feet from the south end, thus completing the work undertaken, with the exception of a cribwork retaining wall 20 feet in length, on each side at the north end.

During the fiscal year ended June 30, 1904, the sum of $500.75 was expended in nearly completing the cribwork retaining walls at the north end.

The total expenditure to June 30, 1904, including a refund of $876.42 to the provincial government was, $6,317.98.

WHITE'S COVE.

White's Cove, Digby county, is a settlement of some 200 or 300 people, engaged in fishing and farming, situated on the shore of St. Mary's bay, about five miles south of Weymouth. In 1903-04 the department expended $1,839.66 in extending and repairing an ancient wharf of cribwork. The new block is 38 feet square, and from 18 to 20 feet high, substantially built of round-log cribwork. The next 100 feet in length shorewards was also taken down and rebuilt and the whole wharf, 260 feet long, was levelled up with gravel.

WINDSOR.

Windsor, the county town of Hants, with a population of about 4,500, is an important town situated at the head of the estuary of the River Avon, on the Dominion Atlantic Railway, 46 miles north-west of Halifax. The shipping registered at the port for the year ending 1896, amounted to 131,000 tons. In the neighbourhood are extensive quarries of gypsum, of which about 120,000 tons are annually shipped to the United States. Some two or three million feet B.M. of lumber, are annually exported by water. Up to a dozen years ago the wharfs of the town were comparatively free from mud, and at high water large vessels could lie alongside and discharge or load. In the last few years, owing partly, no doubt to the construction of the new highway bridge, the mud has accumulated in front of the wharfs to such an extent that it is only on an extreme high tide that moderate sized vessels can approach or leave the wharfs.

With the object of scouring away the accumulated mud, the department in 1897-98 began the construction of a training weir, extending down stream from the corner of the Falmouth abutment of the road bridge at an angle of 45 degrees with the bridge. The weir is constructed of brush mattrasses at the bottom, with sufficient stone to keep them in place, and with cribwork on top of them. The thickness of the brush mattrasses, with their load of stone, is from 2 to 4 feet, the average depth of the main or under crib is from 5 to 8 feet, and the uniform height of the 'A'-shaped top crib is 7 feet; the sloping sides of the work are sheeted with 3-inch hardwood plank, and the crest is covered with 6 x 6 x $\frac{3}{4}$-inch steel angle securely bolted. The work is built on shifting quicksands, and owing to the great rise and fall of the tides (about 40 feet) and the great velocity of the current at ebb and flood tide, it was constructed under great and peculiar difficulties.

In the fiscal year ending June 30, 1901, the sum of $2,173.74 was expended in completing the work to its originally designed length of 600 feet.

In the fiscal year ending June 30, 1902, the department expended the sum of $2,725.93 in extending the work a further distance of 100 feet and making repairs.

In 1903-04 the sum of $97.71 was expended in replacing and building a small quantity of the hardwood sheathing on the outer end of the training weir that was torn off by ice in the previous winter.

Spring tides rise about 40 feet, neaps 36 feet.

WOLFVILLE.

Wolfville, King's county, is a town of about 2,000 people, situated on the right bank and near the mouth of the Cornwallis river, which issues into the Basin of Minas at its south-west corner. It is an important station on the Dominion Atlantic Railway, half way between Annapolis and Halifax, 64 miles from Halifax, 66 from Annapolis, and 7 miles east of Kentville, the county town of King's.

In 1900-01 (contract dated May 12, 1900, work finished in November, 1900), the department, at a cost of $6,360.50, built a public wharf on the right bank of the river, near its mouth, at a distance of about half a mile from the town. The approach consists of earthwork—an embankment 144 feet in length, 26 feet wide and of an average height of 5 feet. The wharf itself, which is substantially built of pilework, is 152 feet long, 36 feet wide, including an inclined slope on the south side 10 feet wide. It has an L on the outer end 82 feet long, giving a total face length on the river channel of 116 feet; the L is 40 feet wide, and from 48 to 49½ feet in height along the outer face, giving a depth of water at high water ordinary spring tides of about 47 feet. At low ordinary spring tides the river channel carries a depth of 4 to 6 feet of mostly fresh water.

In 1902-03, the channel of the river moved shorewards, owing to erosion, a distance of some 20 or 30 feet, causing the two outer rows of piles of the wharf to lose more than half their hold in the mud and sand. In consequence of this it became necessary to build cribwork in the spaces between the two outer rows of piles at the end of the L, and also on the opposite end of the wharf alongside the inclined slip. This mode of treatment being insufficient, and the scour continuing, it was decided to remove the outer 20 feet in width for the whole 118 feet in length of the wharf and rebuild it on the inner side of the L. The work was begun on October 1, 1903, and vigorously carried on until December 24, when, owing to the severity of the weather and the rapidly accumulating ice, operations were suspended.

The winter of 1903-04, was the severest known for a great many years. Ice formed in and around the piles of the wharf to a greater weight and thickness than had been known since the wharf was built. The floating power of the ice added to the reduced hold of the piles in the bottom from the erosion of the channel, caused the whole L to be lifted up by the exceptionally high tide of March 3, 1904, to a height of from 5 to 8 feet. A few days later, the whole outer portion of the wharf, including the L, was carried away and destroyed.

In 1903-04, the sum of $1,768.89 was expended in the above alterations and improvements and after the destruction of the wharf, in saving such of the timber as was possible.

Spring tides rise 48 feet, neaps 40 feet.

YARMOUTH BAR.

Yarmouth, the county town of Yarmouth county, is situated at the south-western extremity of Nova Scotia. It is a thriving and prosperous town of nearly 7,000 inhabitants, and, next to Halifax, the largest and most important in Nova Scotia. It is the terminus of the Dominion Atlantic Railway, whose fine Clyde-built steamers make regular trips throughout the year to Boston. There are several important manufactories in the place, but the leading business is shipping, of which a larger tonnage is owned here than in almost any locality in Canada.

At low water, Yarmouth harbour, in which spring tides rise 16, neaps 13 feet, consists largely of mud flats covered with eel grass. The harbour is formed by a succession of shingle or gravel beaches (called Stanwood beaches), aggregating about one mile in length, which connect the northern end of Cape Fourchu island, also about a mile long, with the southern end of Stoney Point, on the mainland, and separate the harbour from the Bay of Fundy.

In 1867, it was found that part of the beach between Cape Fourchu and Stoney Point was gradually wearing down, and unless this action was arrested the sea would eventually sweep away the beach and destroy the harbour. The government of Nova Scotia began the work of protecting the beach in 1867, constructing 200 feet of cribwork at Stoney Point. Between 1873 and 1875, the Public Works Department constructed the remaining 2,800 feet of protection work required to reach Cape Fourchu, and added buttresses or groynes to stop the movement of the gravel.

Between 1875 and 1878, the protection works, though substantially built of stone-filled cribwork and close piles on their seaward faces, had to be repaired and strengthened, the expense amounting to over $25,000.

Between 1888 and 1896 no further works of repairs were undertaken on the beach protection, and it become dilapidated and decayed. Breaches were made through it by the sea in various places. During the year 1896-97, the sum of $2,983.62 was expended in carrying on the most urgent works of repair, and in 1897-98, a further sum of $3,234.51 was expended in continuing and completing these repairs. This last sum was applied in rebuilding a length of 50 feet at the eastern end of the protection work, and in constructing a groyne, projecting at right angles from the same end, for a dis-

tance of 175 feet. The groyne is 25 feet wide and 11 feet high, substantially built of round-log, stone-filled cribwork. Its object was to protect the beach at the north-eastern end of the main cribwork protection, by accumulating the gravel and breaking the waves before they expended their force on the beach. It has admirably fulfilled its purpose, as gravel has accumulated at the junction of the groyne with the main work to a depth of over 14 feet.

In 1898-99, the sum of $300 was expended in repairing a small but serious breach 25 feet long, in the bottom of the outer face of the beach protection work, and in covering with 3-inch hemlock plank a length of 430 feet of the top of the work, in order to prevent the ballast from being washed out by the waves.

In 1899-1900, the sum of $970.27 was expended in repairing two or three small but dangerous breaches in the seaward face of the work, and in covering the top for a length of about 670 feet with 3-inch plank to prevent the sea from washing out the ballast.

In 1900-01, the sum of $3,389.70 was expended in extensions and repairs, the individual expenditures on the work done being as follows:—

(a.) $142.43 was expended in repairing and filling with ballast a length of 60 feet of the older portion of the work.

(b.) $2,798.50 in extending the work 514 feet westerly; this new length was 8 feet wide, from 5 to 8 feet high, substantially built of round-log cribwork, sheathed on the seaward side, and covered on top with round spars well spiked on.

(c.) $448.77 in rebuilding a length of 50 feet of the older portion of the work, near the eastern end, which was severely damaged by a heavy sea, November 9 and 10, 1900.

In 1902-03 the sum of $120.94 was expended in a few petty and miscellaneous repairs to the beach protection work, the work done comprising the replacing of a few pieces of close-sheathing washed off by winter seas, the renewal of some flooring, and the respiking of loose portions.

In 1903-04 the sum of $325.57 was expended in building a fence on both sides of the beach protection, 1,250 feet long, for the purpose of making it safe for horse traffic. A few minor repairs to the beach protection work were also made.

Spring tides rise 15 feet, neaps 12 feet.

PRINCE EDWARD ISLAND.

AITKEN'S SHORE PIER.

Aitken's Shore pier, King's county, is on the south side of the Montague river, opposite Georgetown. The pier was in former years quite an important place of shipment, and also used as landing for the ferry steamer plying between Georgetown and Lower Montague, since, however, the construction (about twenty years ago) of the new ferry landing half a mile east and lower down the river, and a private wharf a short distance west of it, the pier was not kept in repair and latterly had become a complete wreck, and useless for shipments. The great need of proper shipping and landing facilities in the locality having been represented to the Dominion government by the residents of the surrounding districts, the old pier was taken over from the local government and parliament made an appropriation of $3,200 at the session of 1902 for the works of reconstruction required to place the pier in serviceable condition. Materials were got out during the winter of 1902-03 and construction began early in May. By June 30, 1903, the end of the fiscal year, a length of 167 feet of the shore end of the pier, 22½ feet wide, had been rebuilt the full height, an adjoining length of 80 feet, also 22½ feet wide, to within 1 foot of the top.

The expenditure during the fiscal year 1902-03 was $2,163.99, which included the cost of much materials ready for use in the work.

During the fiscal year 1903-04, the old pier was completely restored over its whole length of 356 feet, and an extension 35 feet long, 30 feet wide was built in order to bring the outer end of the pier in a depth of 10 feet at low water, and 15 feet at high water spring tides.

At the bottom, the structure is formed of poles close laid lengthwise and crosswise, which are ballasted at intervals through pockets formed for the purpose. The top portion, from 3 to 4 feet in height, consists of walls of square timber secured by longitudinals and cross ties, the space thus inclosed being filled with ballast, on top of which a roadway is formed of broken stone and gravel ; the sides and ends of the pier are fender-piled at 5 feet centres.

The pier has now a total length of 391 feet and is 20 feet wide for a length of 250 feet at the inner end ; the remaining length of 141 feet is 30 feet wide.

The amount expended during the fiscal year 1903-04 was $2,174.80, and the total cost of the work was $4,338.79.

BAY VIEW.

Bay View Pier, Queen's county, is situated on the eastern side of, and near the mouth of the Hope river that enters New London harbour about 3½ miles south-east of the harbour entrance. The pier has a total length of 509 feet and 18 to 20 feet wide on a length of 409 feet outwards from the shore, thence increasing gradually to a width of 35 feet at the outer end, where a depth of 10 feet is formed at low water or 14½ feet at high water spring tides. The pier is not exposed to any heavy sea, but being too low the top clay and gravel road is exposed to being damaged by extreme high tides and storms.

During the fiscal year 1903-04, the sum of $47.61 was expended in repairs to the roadway.

BEACH POINT.

Beach Point, King's county, is on the south side of the entrance into Murray harbour. From the 'Point' a sand spit extends in a westerly direction along the edge of the channel, for a distance of about a mile, and incloses between it and the shore a basin having a depth of from 3 to 5 feet at low water, which affords good shelter and anchorage for fishing boats. The sand spit or bar is dry at low water and has a width of about 500 feet. During the last fiscal year 1903-04, a cut was made through the bar by the use of 'mud diggers' worked from the ice ; the channel so dredged is 575 feet in length, 10 feet in width, with an average depth of 5 feet ; it has proved to be most satisfactory, and of great benefit to the fishermen of the locality. The cost of the work was $334.49.

CASCUMPEC HARBOUR AND BAY.

Cascumpec Harbour and Bay, Prince county, is on the northern coast of the island, its entrance is about 18 miles south of Cape North, and 20 miles southwesterly from the entrance of Richmond bay. The harbour and bay are connected by what is known as 'Cascumpec Narrows,' a shallow stretch of water from a half to a mile in width, lying between the sand dunes and sand bars that extend about parallel with the shore of the island between the two harbours or bays.

Cascumpec Harbour or Bay is of considerable extent, being from 3 to 4 miles in length and from a mile to 3 miles in width, with a good depth of water; its entrance is perfectly safe-sheltered in all winds. The bay is much used as a harbour of refuge by coasters and fishermen ; at its head is situated the town of Alberton, the second in importance in the county, and one of the principal stations on the line of the

Prince Edward Island Railway, which has a branch to a deep water wharf, with all necessary sidings, warehouses, &c., at the harbour front from where an extensive business is carried on during the season of shipment. This harbour, however, like all the others on the northern coast of the island, is obstructed by an outlying shifting sand bar situated about a mile off its entrance, between the beaches, and on which the usual greatest depth is about 10 feet at low water spring tides. This is at times somewhat reduced on account, it is said, of breaches occurring in the sand beaches; these openings known as 'New Harbour' and 'Goose Harbour' are situated about two and three miles east of the entrance of the harbour. Some three or four years ago, a further break occurred in the beach about a mile east of the entrance; in order to prevent further damage, this break was closed during the winter and spring of 1903, by building a dam composed of brush and stone in the bottom, with a cribwork top fully ballasted and fender-piled at 10 feet centres, on a length of 350 feet and 12 feet wide at top. Shortly after the completion of the work above described, a further break of considerable extent occurred at its northern end, it is doubtful that any good results can be obtained unless very extensive works are built.

During the spring of 1904, an additional length of 85 feet of dam was built at the north end of the work previously constructed and of the same design, at a cost of $1,072.75.

CHINA POINT.

China Point pier, Queen's county, is situated on the west side of the Orwell river, near its entrance into Orwell bay. A pier was originally built at this place by the local government, and came under the control of the Dominion government in 1884. It has a total length of 426 feet and consists of a shore abutment or approach, 140 feet long, six blocks with intervening spans, and a pier head fronting 72 feet on the channel, and having a width of 37 feet, with a depth of 15 feet at low water or 23 feet at high water spring tides. Being a very old structure, when assumed by the Dominion government, the pier head has since been rebuilt, and from time to time repairs to the inner portion were effected to keep it in passable condition.

During the last fiscal year, 1903-04, the sum of $125.56 was expended in general repairs to the roadway; the work consisted in renewing eight span beams, replacing part of the planking on the pier-head and spans, and repairing the broken stone and gravel roadway on the shore abutment.

COVE HEAD.

Cove Head, Queen's county, is on the north side of the island, about midway between Tracadie and Rustico harbours. Within its entrance, which at low water is about 250 feet wide, the harbour or bay has a length of about 4 miles, and a width of from half a mile to a mile; it receives the waters of Black river, and Auld's, Mill and McCallum's creeks. It is navigable over the greater portion of its extent for small vessels and boats. The depth of water on the outer bar, however, is only from 3½ to 4 feet at low water or of from 7½ to 8 feet at high water spring tides. The harbour proper commences immediately inward of the entrance and extends westward between the sand beach, and what was an extensive sand flat dry at half tide. Formerly the main channel into the bay was on the western side of the sand flat; it had a width of 300 to 400 feet, with a depth of 5 feet and over at low tide, the small channel that existed on the east side of the flat was shoal and narrow. During late years two other channels have opened up through the flat, resulting in the main channel becoming nearly closed. In order to improve this condition, a contract was entered into on March 12, 1903, for the construction of a 'shear dam,' 1,575 feet long, extending in a north-westerly direction from the south-eastern side of the bay, and completely closing

two of the channels. Work was commenced early in May, 1903, and by the end of June of that year the dam had been partly completed on a length of 980 feet, and the sum of $1,289.40 had been paid to the contractor.

During the fiscal year 1903-04, the work was continued and completed on November 23, at a total cost of $5,917.40. The work consists of a round-log open cribwork resting on a bottom formed of brush; the cribwork is 12 feet wide, excepting the outer 20 feet of its length, which has a width of 22 feet; its interior is filled with rock ballast and close-laid brush placed in alternate layers; the sides of the dam are fender-piled at 10 feet centres, while the end and a length of 20 feet on each adjoining side, is close-piled, the top is covered with close-laid trimmed poles.

GRAHAM'S POND.

Graham's Pond, King's county, is situated on the east coast of the island about 5 miles south of the entrance to Cardigan bay, and about the same distance north of the entrance to Murray harbour.

The pond has a length of about half a mile, and a width of from 600 to 800 feet, carrying in the body of the pond and at a short distance from the entrance, a depth of 6 to 8 feet at ordinary pond level, which is usually from 1½ to 2 feet higher than ordinary low water, and 3 to 3½ feet below high water spring tides, which rise about 5 feet.

During 1900, the Department of Marine and Fisheries cut a new channel into the pond in order to make it possible for boats to enter at all times of tides, but the new cut gradually filled in again nearly to its original state. In the fall of 1901, under instructions of the department, the cut made by the Marine and Fisheries Department was cleared out, and a protection of brush and stone was built, which proved effective in keeping the channel in the desired course as well as giving some shelter for boats. In 1902-03, the protection works were further extended at a cost of $500.

During the fiscal year 1903-04, the sum of $499.84 was applied on a further extension of the works on either sides of the 30-foot channel to a length of 280 feet.

GRAND RIVER.

Grand or Ellis River, Prince county, empties into Richmond bay, about seven miles north-east of Wellington, a station on the Prince Edward Island Railway.

During the years 1880-81-82, the Prince Edward Island government built a wharf on the north side of the Grand river, near its mouth, at a cost of $4,618.60. The wharf is 654 feet long, 22 feet wide and consists of a shore abutment 530 feet long, two blocks respectively 31 and 44 feet long and intervening spans of 25 feet each.

The structure was built of close-faced square timber cribwork filled with stone and brush, the top of the outer block was planked, but the abutment was top finished with clay and gravel.

Owing to the unwillingness of the local government to keep it in repairs, the wharf became dilapidated and unfit to be used for shipping purposes, until the latter part of the year 1902, when it was transferred to the Dominion government.

During its session of 1903, parliament granted the sum of $1,500 for the reconstruction of the wharf. Work was commenced early in the spring of 1904, and at the end of the fiscal year, the top of the shore abutment, 530 feet in length, had been rebuilt, 132 fender piles driven on both sides and a stone and earth approach 16 feet long had been built. The expenditure during the fiscal year 1903-04 was $1,337.12.

LEWIS POINT.

Lewis Point pier, King's county, is situated on the north side of Cardigan river, a short distance below Cardigan Bridge (the head of navigation), and about eight

miles from the entrance of the river into Cardigan Bay. The pier is 575 feet long, and is composed of a shore abutment 365 feet in length, two intermediate blocks each 35 feet long, and an outer block 79 feet in length, with intervening spans each about 20 feet wide, the outer block is 33 feet wide. At the outer end and sides of the outer block there is a depth of 12 feet at low water or 17 feet at high water spring tides.

During the fiscal year 1903-04, the top portion of the shore abutment has been renewed on its total length of 365 feet and fender piles were driven 10 feet apart on both sides, general repairs were done on the outer part of the pier. The expenditure for the fiscal year was $1,088.93.

MIMINIGASH.

Miminigash Harbour, Prince county, is situated on the north-west coast of the island, about fifteen miles from North Cape, and eighteen miles from West Point. Before its improvement by the department it was one of the numerous ponds along the coast that empty into the Gulf of St. Lawrence by numerous channels through sandy beaches. These channels constantly change their position, and during severe storms often become blocked up, the entrance to Miminigash Pond, however, being well sheltered by 'Miminigash Reef,' a ledge of rock nearly a mile long, that lies parallel with the shore at about half a mile distant, it has the advantage over the other ponds on the coast, and is the one generally used by the fishermen during stormy weather for shelter. After an examination of different sites proposed, it was selected by the department for the formation of a harbour on that portion of the coast. With this object in view work was commenced in 1878, and now consists of breakwaters or piers on each side of the entrance, placed 56 feet apart, confining the channel in a permanent position. The breakwater on the north side is 550 feet long, and that on the south side 350 feet, inward of both of them there are beach protection works, to guard against new channels forming back of the breakwaters, these protection works are of cribwork solidly filled in with brush, poles and stone. The works are of close-faced square timber, fully ballasted, and planked over, the outer faces are close-piled.

During the fiscal year 1903-04, some excavation was done in the channel to remove sand and gravel which had been carried over the northern breakwater during a fall storm; the work extended over a length of 167 feet, 12 feet wide and average depth of 4 feet, the expenditure was $350.

NEW LONDON HARBOUR.

New London Harbour, Queen's county, is on the northern coast of the island, about 10 miles east from the entrance into Richmond bay. The entrance of the harbour has a width of about 1,200 feet, it is about 3 miles long and nearly as wide; it receives the waters of the Hope, and South-west, the Stanley and the French rivers, all of which are navigable for short distances and have wharf accommodation from which an export is made of large quantities of farm produce; the districts surrounding the harbour are well cultivated and very productive. The harbour is largely used, as a fishing station and harbour of refuge, for which it is most conveniently situated, the fishing grounds in the vicinity are considered the best in the Gulf of St. Lawrence. For the improvement of the entrance, which is obstructed by a shifting sandbar, works were begun by the department in 1878, these now consist of breakwaters or beach protection works on each side; that on the eastern side has a length of 1,120 feet, while the western one is 460 feet long; the object of their construction being to extend and preserve the sand beaches, and to so confine the current as to cause increased scour across the sandbar. The result obtained has been most satisfactory, the depth of water in the harbour is 6 feet at low water, and 12 feet over the bar, making this one of the best on the north coast of the island.

Since construction the western block has received no damage, the eastern one, however, being exposed to a very strong tide, the action of running ice, and at times, to a very heavy sea, requires, about yearly, some expenditure for its maintenance. During the fiscal year 1902-03, the sum of $745.93 was expended in rebuilding a length of 50 feet, and in repairs to a further length of 200 feet. During the fiscal year 1903-04, the sum of $477.15, was expended in depositing additional ballast in different parts of the work where settlement had occurred, repairing the sheathing on the outer block, and rebuilding about 4 feet in height two parts, respectively, 130 and 225 feet long.

On May 3, 1904, a contract was entered into for the construction of a 'jetty' or shear dam on the western side of the entrance about 1,000 feet inwards, or south-westerly from the western breakwater, the purpose of the new work being to improve the depth of water over the shoal at the junction of the French and South-west rivers. The work will have a length of 550 feet, extending to near the inner edge of the shoal ; for a length of 300 feet at the inner end, it will be constructed of round-log open cribwork 12 feet in width, solidly filled with ballast, and fender-piled on the sides every 10 feet; for a further length of 200 feet the width of the work will be 17 feet and will be constructed of brush, piles, and stone ; the outer 50 feet being of similar construction, but 23 feet in width. The work was commenced on June 2, 1904, and by the end of the fiscal year, the cribwork portion, or inner 300 feet, was about completed, requiring only some little ballasting and the driving of a few fender piles.

NORTH CARDIGAN.

North Cardigan pier, King's county, is situated on the north side of the Cardigan river about five miles from Cardigan bridge, and is one of the Prince Edward Island piers, control of which was assumed by the Dominion government in 1884. The pier has a length of 381 feet, consisting of a shore abutment or approach 100 feet long and seven blocks with intervening spans, and from 23 to 25 feet wide out to the outer block or pier head, which has a width of 32 feet ; the blocks are from 19 to 25 feet long, and the spans from 14 to 26 feet. The approach and all the blocks are constructed of close-faced timber work, filled with brush, stone and gravel, the latter forming the roadway, excepting on the two outer blocks which are floor stringered and planked over. Being a very old work, and much out of repair when assumed by the Dominion government, it has since required extensive repairs from time to time to keep it in passable condition for traffic, the greater portion of it has been nearly all rebuilt.

During the fiscal year 1903-04, the construction of an extension to the wharf was commenced and nearly completed, the new work is 75 feet long, 32 feet wide and the outer end stands in 14 feet at low water spring tides which rise 5 feet, it is built of close-faced round logs, up to low water level, above which the work is built of close-faced square timber, filled with stone ballast and the top finished with broken stone and gravel ; it is intended to fender pile the sides and end at above 5 feet centres, and put each alternate pile of creosoted timber. The expenditure on the extension, up to June 30, 1904, has been $2,699.88.

ST. PETER'S BAY.

St. Peter's Bay breakwater, King's county, is on the north coast of the island, about thirty-five miles west from East Point, and on the west side of the entrance into St. Peter's Bay, the work was constructed by parliament in 1878 to improve the entrance, and afford a better shelter for the fishermen. Originally it had a length of 226 feet, built of close-face solid timber work, fully ballasted, floor stringered and planked over ; to this has since been added beach protection works that extend from

the inner end of the breakwater connecting with the sand hills or high ground so as to prevent a channel being cut through the intervening low beach; this breast work or beach protection has a length of 1,420 feet, a width of 9 feet and averages 5 feet in height. The outer end of the breakwater having been damaged by the running ice, action of the teredo, and through natural decay, a contract was entered into on September 26, 1902, for the construction of an extension 30 feet in length, that would give some further shelter and thoroughly secure the work. Materials were got out for this work during the winter or 1902-03, and construction was commenced in the latter part of May. The work was satisfactorily completed on September 17, 1903, at a cost of $1,557.50, of which $147.50 was for inspection.

SOURIS HARBOUR.

Souris harbour, King's county, is situated on the southern side of the island, about sixteen miles west from East Point, and is most important as a harbour of refuge, and and maintained by the Dominion government; the work which was commenced in 1875, place of shipment, for both of which it has been made available by a breakwater built has now a length of 1,250 feet, and being of different forms, widths, and construction, for a description of which it may be divided into three sections or portions, viz., inner section, 290 feet long, and 30 feet wide, built of close-faced timber, plumb-faced on the sides, and having on the seaward side, a protecting stone slope ; the work stands in an average depth of 7 feet of water at low tides ; middle section, 530 feet long, averaging 65 feet wide, also of close-faced square timber, but on the seaward side having the upper 10 feet sloping 1 to 1, this section stands in an average depth of 17 feet at low water, and, during the past three seasons, has been having a stone protection slope formed on its seaward side ; on the outer or third section, 390 feet long, 24 feet wide, and has on the seaward side a protection of stone, extending to within 3 feet of the top, and sloping 3 to 1, its end terminates with a block 40 x 80 feet, constructed of close-faced creosoted timber, standing in a depth of 22 feet of water at low spring tides.

During the fiscal year 1903-04, 2,240 cubic yards of stone have been deposited on the seaward side of the middle section, in continuation of the work commenced during the two previous years, towards the formation of the stone protection slope. The cost of this work including superintendence was $8,572.60, and the sum of $895.49 was expended in ballasting different parts of the body of the work where settlement and washout has occurred, 831 tons of durable imported stone being employed for the purpose.

Slight repairs were also effected on the outer section.

The total expenditure for the year 1903-04 was $9,498.09.

STURGEON.

Sturgeon pier, King's county, is situated on the southern side of Cardigan Bay, about six miles south of Georgetown, the terminus of the Georgetown branch of the Prince Edward Island Railway.

The pier, constructed many years before confederation, by the local government, is one of the Prince Edward Island piers, assumed by the Dominion government in 1884, it is 434 feet long and from 20 to 25 feet wide. Originally the outer 184 feet was formed of blocks and spans, but the latter have since been filled in ; with the exception of the outer 40 feet of the length, the top is finished with broken stone and gravel filling, which require some repair nearly every year, owing to the work being low, and storm tides often pass completely over it.

During the fiscal year 1903-04 the sum of $59.62 was expended in making up washout and settlement that had occurred, and in replacing some broken and defective planks on the pier head.

TIGNISH.

Tignish Harbour, Prince county, is on the north or Gulf coast of the island, about six miles southward from North Cape. The harbour is at the mouth of the Tignish river that enters the Gulf of St. Lawrence at this place. On each side of the rivers' mouth, the coast line being quite straight for a long distance, gales from the north-east to south-west throw in a very heavy sea, and this acting on the sand of which the beaches are mostly composed often caused the entrance to become completely blocked up, until broken through by a freshet or an unusually high tide. In order to keep the entrance open, and preserve the channel in one position the government of Prince Edward Island, in 1868, began the construction of works on each side of the river mouth, contracting it to a width of 40 feet, thus increasing the scouring effect of the current in entrance channel. After the transfer of these works to the Dominion government they were raised, repaired, and extended ; breast-works or beach protections were built on either side of the piers or breakwaters so as to connect them with the high ground, and prevent all possibility of a channel, forming at the back.

During the fiscal year 1903-04, the sum of $699.93 was expended in the repair and levelling of the outer block of the northern breakwater that had settled on an average depth of 3 feet.

VERNON RIVER.

Vernon River pier, Queen's county, is situated at the head of navigation of the Vernon river and about 2 miles above its entrance into Orwell bay, it is built on the lower side of the public road bridge with which it is connected by an approach 30 feet in length and 30 feet in width. The pier is one of the Prince Edward Island piers which were transferred to the Dominion government in 1884, it is a close faced block 120 feet in length by 30 feet in width placed parallel with the channel, its outer face is in a depth of 10 feet at low water or 18 feet at high water spring tides. The channel or approach from the main channel of the river to the pier, is about a mile long and was made by dredging. As the pier, &c., was a very old structure and much out of repair when taken over by the Dominion government, some expenditure has been required almost yearly to keep it in passable state for traffic.

During the fiscal year 1903-04, the sum of $299.26 was expended in replanking the inner 80 feet of its length, and the adjoining approach from the bridge, driving 38 fender piles, ten of which were of creosoted timber, putting on new guard timbers, a new mooring post, and new floor stringers.

VICTORIA.

Victoria, or Crapaud pier, Queen's county, is situated at the head of navigation of the Crapaud Basin, at Victoria village which is the most important place of shipment after Summerside, on the south-western coast of the island ; it is about midway between Charlottetown and Summerside harbours, and about 11 miles distant (south) from Emerald Junction on the Prince Edward Island Railway, it is the outlet of probably the best tilled and most productive districts in the island ; a steamer as well plies weekly between Victoria village and Charlottetown. Since confederation the department has expended considerable sums in dredging to improve the approach from deep water in the 'Basin' to the pier, and in repairs and reconstruction which were urgent owing to the dilapidatel condition of the work when it was transferred to the Dominion government. The pier has a total length of 486 feet and consists of a shore abutment 286 feet long, and 20 feet wide, a middle section 143 feet long and 37 feet wide, and the pier head 57 feet long and 58 feet wide, with the outer face in a depth of 9 feet at low water, which depth was obtained by dredging. Spring tides rise 8 feet.

During the fiscal year 1903-04, the sum of $84.69 has been expended in putting new mooring posts, in general repairs to the planking of the roadway, and other trifling repairs.

WEST POINT.

West Point wharf, Prince county, is situate on the north side of Egmont bay, on the eastern shore of Northumberland Strait, about 14 miles from O'Leary station on the Prince Edward Island Railway, and about 35 miles by water from Summerside harbour.

The wharf is one of the Prince Edward Island piers, control of which was assumed by the Dominion government in 1884. It had been built many years before confederation by the provincial government, to give some shipping facilities to the district, there being no wharf or shipping place at the time, where vessels of any size could call at between Summerside and North Cape, a distance of about 60 miles. West Point being midway between these points, was considered a favourable site for a wharf and the work is said to have proved of much benefit up to 1884, when it was badly damaged on the breaking up of the ice, and remained in bad condition until 1898 when it was thoroughly repaired by the department. The wharf had a length of 620 feet, a width of 30 feet, and extended out to a depth of about 7 feet at low water or of 11 feet at high water spring tides. For the purpose of obtaining a better depth of water, a contract was entered into in 1900, for the construction of an extension 100 feet in length, 30 feet in width, reaching a depth of 9 feet at low water, the work was completed in 1901. Since its completion, however, a sandbar has formed a short distance out from the end of the wharf where only 7 feet is found at low water.

During the fiscal year 1903-04, the sum of $1,438.81 was expended in levelling the new part of the work which had settled considerably, and protecting a portion of the sides by close piles.

PROVINCE OF NEW BRUNSWICK.

ANDERSON'S HOLLOW.

Anderson's Hollow, Albert county, is a cove of Salisbury bay, on the north-west side of Chignecto channel in the Bay of Fundy. Spring tides rise 40½ feet; neaps 32½ feet.

The breakwater wharf at this place was begun in 1879 by the construction of a detached block 550 feet from the shore, with which it was afterwards connected. In August, 1885, the work was 290 feet in length, and three years later was carried to the shore. The structure, 25 feet wide on top, was originally 27 feet high at the outer end, but the bottom having been raised by the accumulation of the littoral drift, the height is now 3 or 4 feet less. It is built of round timber cribwork, lightly battered on the inside, but sloped at the rate of ½ to 1 and sheathed on the weather face.

The breakwater was damaged by storm on November 21, 1895, when a small lighthouse placed at the outer end was swept away, together with part of the break; while some of the top work at the head was simultaneously shaken and started.

In 1895-6, a small sum was applied to bolting loosened timber for temporary security.

During the fiscal year 1896-97, the inside face of the wharf at the outer end, which had received a heavy list in the storm of the previous year, was taken down

and rebuilt for a distance of 75 feet on top and 44 feet on the bottom. The list was taken out, the new face being carried to a height of 15 feet, in order to level the top, and new covering was laid for a length of 75 feet. Seventy feet out of 110 feet of dismantled break were reconstructed, and fenders were placed on the inside of the new face.

In 1898-99, by an expenditure of $121.31, twenty-seven pieces of new sheathing were laid and bolted to the sloping-face ; a new cap and face-timber were inserted, and the gap in the break, 40 feet long, left unfinished at the time of the previous repairs, was built up with 4 tiers of timber strengthened with knees.

In 1900-01 the break-timbers, which had been started up from 3 to 9 inches by storms for a distance of 290 feet, were restored to position. For 25 feet at the outer end, the break was raised one tier ; 8 bridles, 9 inches square, were placed between the knees of the break for a distance of 100 lineal feet ; 3 new pieces of 6-inch sheathing were placed on the sloping face, and loose planks were secured with bolts. Through the shoal obstructing the work on the inside, a channel 300 feet long, 35 feet wide and 5 feet deep was made by means of a wheel scraper. It was found, however, that the shoal formed again rapidly with the recurrence of any south-west swell. A groyne, 50 feet in length, made of piling and 9-inch timber, was built on the outside of the work, in order to check for a time the accumulation of littoral drift on the inside.

During the year 1901-02, new sheathing, 6 inches thick and from 22 to 26 feet long, was laid and secured with ¾-inch bolts at different places along the weather face of the outermost 190 feet. Additional bolts were also driven to secure the old and loosened sheathing ; while 71 pieces of new covering, 6 inches thick, were placed on top of the work.

During the year 1902-03, the weather-face of the outer block, 100 feet long, having become decayed was cut down nearly to the bottom and rebuilt for a width of 13 feet with heavy timbers secured in great measure with screw bolts, the outside being sheathed with 9-inch spruce. More than half the covering of this block was renewed. On it a new break was built three tiers in height for 26 feet, two for 61 feet, and one tier for 13 feet in length. The covering was patched on other parts of the work. Four new fenders were placed and the cap was renewed for a length of 47 feet. An extension of 50 feet, for which foundations were excavated through the shoals to the rock, was begun and brought up to a height of four tiers.

During the fiscal year of 1903-04, the break on the outer block was completed and the sheathing was fully bolted. An extension, 50 feet long, and 27 feet wide, on top, was begun and brought up to within two tiers of the finished top. The sheathing, fenders and covering yet require to be applied to complete this extension. The shoal was excavated sufficiently to make beds for the shipping.

Like many other works in the Bay of Funday, Anderson's Hollow crosses the direction of the flood stream and of the prevailing winds. In consequence, an accumulation of littoral drift is found on the south-west side, which travels round the end, and is deposited under the lee of the breakwater, forming a shoal which is an obstacle to vessels.

The total expenditure to the 30th of June, 1903, amounted to $20,569.20.

The expenditure during the fiscal year 1903-04 was $1,797.22.

BELLIVEAU.

Belliveau, Westmoreland county, is a farming settlement on the eastern side of the Petitcodiac river, 14 miles below Moncton, and nearly opposite Hillsborough, in Albert county.

The department constructed a wharf here, in 1888, of round timber cribwork, 233 feet long, 24 feet wide on top and 23 feet high at the outer end, to replace a work de-

stroyed in 1869, and to afford facilities for shipping lumber and produce and for landing supplies.

Since its construction, no expenditure has been made on the work, and lately the top has been so much out of repair as to render the wharf unfit for use. Spring tides rise 45 feet, neap tides 38 feet.

During the fiscal year 1903-04, repairs were commenced and carried out to the extent of removing the old cap pieces covering, and upper face timbers, renewing six sticks of the second tier of face-timbers, 18 cross-ties and the four mooring posts. A new tier of upper face-timbers was laid and above it two tiers, close laid, of 10 x 10 square timber around the sides and outer end. The interior for a length of 135 feet from the outer end, was filled with 3½ feet in thickness of brush, which, for a length of 19 feet, was covered with about nine inches of stone. A total of 120 cubic yards of stone was procured towards completing the repairs.

Expenditure for the year was $750.

The total expenditure to date is $3,350.27.

BLACK BROOK.

Black Brook (or Loggieville), Northumberland county, is situated on the southern side of Miramichi river, six miles below Chatham. It is the terminus of the Canada Eastern Railway, and a port of call for the steamer of the Miramichi Steam Navigation Company.

During 1901, the department constructed a wharf at Black Brook, immediately below the Bentley wharf, so-called. It consists of an approach or stone embankment 172 feet long and 20 feet wide on top, with slopes of 1 to 1 on the sides, a span of 15 feet and a pier-head, 25 x 40 feet, of close-faced timber-work, forming a total length of 212 feet, with the outer end in a depth of 10 feet at low water. The top of the approach was finished with cross-ties placed 8 feet apart, filled between with earth and gravel, and at the end of the ties, cap timbers were placed on each side of the work. The wharf was completed in October, 1901.

During a high tide, accompanied by a heavy storm soon after the work was completed, the earth and gravel were washed off the top of the approach and the cross-ties and cap-timbers were displaced.

During the fiscal year, 1902-03, the cross-ties and cap timbers were replaced in position and the ends of the ties secured to the upper stones of the slope with blind wedged bolts. Earth and gravel were again placed between the ties to a depth of three inches above their tops, all openings on the sides were closed to prevent the gravel from working out, and a plank walk, 3 feet wide, was placed along the lower side of the wharf. A pile bulkhead, 18 feet long and 9 feet wide, braced with walings and ties, was built from the lower corner of the Bentley wharf to the inner end of the span of the departmental work, the whole space, 120 feet long and from 10 to 20 feet wide, between the two wharfs, was filled with brush and stone and the top was finished with gravel level with the top of the departmental wharf.

During 1903-04, the Bentley wharf (so-called) was acquired by the department, for the sum of $3,000, and in May, 1904, its repair was commenced, and also the construction of a pile wharf of 55½ feet frontage and 48½ feet depth to fill the corner between the departmental block and the Bentley wharf.

The repairs consisted in rebuilding the outer and upper faces of the Bentley wharf of cribwork, ballasting and covering on top with 4-inch plank from 12 to 16 feet wide. The inner portion was filled with brush, stone and gravel to the level of the covering, making the whole from 3½ to 4 feet higher than before.

A portion of the new wharf next the departmental block was constructed of a width of 29 feet from the face, covered with 4-inch plank and partly filled with brush and stone. A bulkhead of piles and posts was built to prevent filling material placed

in the new work from sliding into the span behind the departmental block. A total of 483 tons of stone was procured for the work.

The expenditure for the fiscal year 1903-04 was $2,060.96 not including the amount paid for the Bentley wharf and right of way.

The total expenditure to June 30, 1904, including $3,000 paid for the Bentley wharf, was $12,537.27.

BUCTOUCHE.

Buctouche river enters the Northumberland Starits about midway between Richibucto and Shediac by a narrow and winding channel 4 to 5 fathoms deep in places, but with a ruling depth on the bar of only 8 feet at low water spring tides. It is navigable for eleven or twelve miles.

Four mile from the sea is Buctouche village, Kent county, where a considerable trade is carried on in lumber, coal, fish, &c. In 1884-86 the department constructed here a wharf of round timber fendered with piles, about 300 feet long and 40 feet wide with a depth of 17 feet at low water or 21 feet at high water spring tides at the face. The work is parallel to the shore and immediately below the road bridge spanning the Buctouche river. A siding of the Moncton and Buctouche Railway runs close to the back of the wharf throughout its length.

In 1894, the wharf having been partially destroyed by fire, repairs were begun but not completed.

In 1898-99 materials were procured and in 1899-1900 and 1900-01 the upper portion was repaired.

During the fiscal year 1903-04 the lower portion, 136 feet long was repaired. The remains of the old cribwork were torn down to about low water mark and 18 bents, generally 8 feet apart, of 6 piles each, were constructed, ballasted, and covered with 4-inch plank on a width of 25 feet. Four pile mooring posts were also driven. The inner 15 feet of the width of the wharf was filled with brush, stone and earth to the level of the covering and this filling was continued along the back of the upper portion where settlement had occurred, and extended as an inclined approach to the road bridge. On the approach from the street a new covering, 17 feet wide, was laid for a length of 128 feet and the cap-timbers were renewed.

The expenditure for 1903-04 was $2,438.93.

The total expenditure to June 30, 1904, was $10,964.80.

BURNT CHURCH.

Burnt Church, Northumberland county, is a farming, fishing and lumbering settlement on the north shore of Miramichi bay, twenty-two miles north-east of Chatham and five or six miles south of Neguac. The Miramichi Steam Navigation Company's boat calls twice daily during the season and the place is much frequented as a summer resort. During 1899-1900, a contract was let for the construction of a wharf 1,180 feet long, composed of a shore block 200 feet long and 20 feet wide ; twenty-three blocks 21 feet long and 20 feet wide, placed 20 feet apart, and a pierhead 60 feet long by 40 feet wide, the latter standing in 9 feet at low water. Spring tides rise 5 feet. The whole was constructed of round timber open cribwork, topped with 12 by 12-inch stringers and 4-inch plank. The work was completed on September 15, 1901.

During 1903-04 complaints having been made that a dangerous rock lay in the path of steamers approaching the wharf, an examination was made and a boulder found weighing about 10 tons, lying 300 feet above the wharf and 50 feet outside the range of the pierhead. A blade broken from a steamer's propeller was found beside it. With the aid of a diver, the boulder was blasted and removed.

Thirteen fenders were placed on the outside face and corners of the pierhead, to prevent damage to the steamer through catching on the face or on the iron straps at the corners.

The outermost span of the wharf was also closed to give security to boats lying inside the pierhead, by placing three longitudinals one above the other between the blocks and spiking 3-inch hardwood plank close laid vertically to each side.

The expenditure for the year was $321.82.

The total expenditure to June 30, 1904, was $14,709.90.

CAMPBELLTON.

Campbellton, Restigouche county, a deal port from which 24,142,117 superficial feet of lumber was shipped in 1902, and an incorporated town of some 3,000 inhabitants, is situated on the southern side of the Restigouche river. It is directly opposite Cross Point, in Bonaventure county, P.Q., fourteen miles above Dalhousie, the shire town of the county and six miles below the head of tide water. Spring tides rise 11 feet.

In 1889, the department constructed a block, 140 feet long and 34½ feet wide on top, of close-faced timber cribwork, 108 feet below what was then known as the Ferguson wharf, and in 1892, another block of similar construction and width, to close the opening between the two works, giving a total frontage to the departmental wharf of 250 feet, with a depth of 12 feet at the outer face.

After the construction of the second block, the Ferguson work was sold to J. P. Mowat, and subsequently by him to Kilgour Shives.

As access could only be had to the departmental work by traversing the Shives' wharf, steps were taken in 1901 to acquire the latter, and as it was in need of repairs, materials were procured at a cost of $2,224.32 during the same year, to effect such necessary repairs, but the work was not commenced owing to delay in the purchase of the property.

During the fiscal year 1902-03, the Shives' wharf became vested in the Crown. The sum of $226.50 was expended during that year in caring for and looking after the timber procured for repairs.

During 1903-04, the repairs of the Shives' wharf were begun on the outside face 90 feet long, and for a length of 50 feet on the upper face. The old work was torn down to near low water level and walings were bolted to main piles on the face and to posts on sills inside and resting on the old work. A ballast floor was laid on the lower walings and covered with 8 feet of ballast. The whole was covered with 6-inch plank for a width of 18 feet on the front face and 15 feet on the upper face, and close piling was driven between the main piles. The inner portion of the wharf was graded level with the flooring with stones and earth. A new pile driver was also built.

On June 30, the work remaining to be done to complete the above repairs was :— driving about eighteen close piles, bolting the same, placing forty short pieces between the piles above the tops of the walings, and placing two mooring posts. A slight amount of grading also remained to be done.

The expenditure for the fiscal year 1903-04, was $7,684.18.

The total expenditure to June 30, 1904, was $26,818.44.

CAPE TORMENTINE.

Cape Tormentine, Westmoreland county, is situated on the south-western side of Northumberland straits, at the extreme eastern end of Westmoreland county. It is the terminus of the New Brunswick and Prince Edward Island Railway and the nearest point of communication between Prince Edward Island and the mainland, the distance being nine miles.

With a view to forming an artificial harbour for purposes of interprovincial communication between the island and the mainland during the winter, a breakwater pier was constructed by the department beween 1886 and 1892.

The structure comprises a straight pier (or approach) 2,500 feet long, the first 1,300 feet of which is a rubble mound 20 feet wide on top with pitched slopes of 2 to 1,

and the remainder of close-faced timber cribwork, 30 feet wide on top, a pierhead and return of similar construction, each 400 feet long and 40 feet wide from the base up to a little above low water, then decreasing to 30 feet at the finished top, which is 4 feet above high water spring tides. Between low water and the top of the work, the head and return present a sloping face sheathed with hardwood to the east and south. The whole incloses a basin or harbour of about four acres in area with depth, up to the autumn of 1892, of 13 to 15 feet at low water, but increased since then, by dredging over some parts, to a depth of 18 feet.

Spring tides rise 7¾ feet and neaps 3¼ feet.

Owing to the ravages of the teredo, repairs became necessary to the timber section of the work soon after its completion and have since been carried on annually. They have consisted mainly in renewing the face timbers and sheathing of the sloping faces of the pierhead and return, protecting the north and portion of the south faces of the approach and about 300 feet of the outer face of the head with large and small stone, and driving close-piling along a portion of the south side of the approach.

During 1901-02, a temporary quay face 180 feet long was constructed along the outer or south face of the return, to afford landing facilities for the steamer 'Stanley' plying between Cape Tormentine and Prince Edward Island during the winter.

This work consisted of piles driven every 4 feet along the outer face and of hardwood timber cribwork tied into the old work. Repairs were also made to different sections of the sloping face. Over 5,000 cubic yards of large and small stone were deposited along the northern and eastern faces of the approach and head; 361 creosoted piles were driven, generally 2½ feet apart, along the harbour sides of the pier, a frame building 100 feet long and 25 feet wide, for the reception of freight and also affording waiting rooms, was built on the return section of the work, and 35,000 feet B.M. of timber were delivered for levelling up 250 feet of the approach which had settled considerably, consequent upon the action of the teredo.

During 1902-03, 750 feet of the approach was raised from 6 inches to 2½ feet and levelled by the addition of new face timbers, cross-ties and stringers, and for 115 feet the bays on the south side were filled with stone. The timbers were treated with carbolineum. Seventy-five creosoted piles were driven 2½ feet apart along the dock faces and 24 along the outside of the quay face built in 1901-02. The quay face was also extended westward 25 feet and protected with boiler plates for a length of 200 feet.

The south-east corner of the pierhead was straightened by a work composed of double close piling (73 piles in all) and walings, filled with stone, covered with 4½ inch plank and secured outside with 4 iron straps.

A movable platform 20 x 8 feet was built at the new freight shed and the latter repaired. New face timbers and sheathing were placed on a length of 80 feet of the sloping face. A new mooring post was placed and 1949:9 cubic yards of large stone and about 450 cubic yards of small stone were deposited outside the pier-head and along both faces of the approach.

During 1903-04, the raising and levelling of the top of the work was continued to the end of the approach, a distance of 330 feet and for 40 feet of the pierhead, and an additional 60 feet of the pierhead was levelled but no covering laid. This work on the pierhead is similar to that on the approach with the exception that a row of piles was driven every 5 feet inside the outer face and screw bolted to face timbers and cross-ties. Sufficient timber for completing the work was procured.

On the section of the pierhead, 49 feet long, near the south-east corner, the old timbers of the sloping face and of a part of the main work were removed nearly to low water level, and a new crib and pilework with vertical face, protected by 42 creosoted piles driven close on the outside, was built to a height of 4 feet above high water, fully ballasted and covered with 5-inch plank. Slight repairs were made to the planking of the return and to the freight shed, and movable platform 7 x 70 feet was built on the pierhead for the winter service and removed in the spring. On the

return, 30 feet of sheathing was removed on the sloping face. A new pile driver frame was built and 410 cubic yards of large and 89 cubic yards of small stone were deposited along both faces of the approach.

The expenditure for the year 1903-04 was $10,109.42.

The total expenditure on this work to June 30, 1904, was $313,190.92.

CARAQUET.

Caraquet, Gloucester county, a thriving fishing settlement and a station on the Caraquet Railway, is situated on the southern side of Baie des Chaleurs, 42 miles east of Bathurst, the shire town of the county.

For the purpose of establishing a deep water terminus for the shipment of lumber, a contract was entered into in March, 1902, with Messrs. Simmons & Burpee, Marysville, N. B., for the construction of a block and span wharf 1,700 feet long, with a depth, along the outer 300 feet, of 22 feet at low water. The contract price was $59,990. Spring tides rise 6 feet.

The wharf is to consist of an approach or shore block 255 feet long and 25 feet wide on top, 25 blocks 25 feet square on top, with sides battering 1 in 9 ; a pier-head 300 feet long and 40 feet wide, and 26 spans or openings of 20 feet each. The blocks are to be constructed of round timber open cribwork, and the openings spanned by double 12 x 12-inch timbers.

The work of construction was commenced on July 7, 1902, and at the close of the fiscal year 1902-03, had progressed as follows :—The cribwork of the approach or shore block and blocks Nos. 1 to 5, inclusive, were completed, ready to receive the corbels and stringers ; block No. 6 was constructed to within one tier of cross-ties of the required height, and blocks Nos. 7, 8 and 9, were built eight tiers high and placed in position.

At the close of the fiscal year 1903-04, the cribwork of the approach and first ten blocks were completed ready to receive corbels and stringers ; the cribwork of block No. 11 was built to within 3 tiers of the top ; blocks 12 to 19 were built to full height ; blocks 20 to 23 to about 2 feet above low water level and block 24, 19 tiers high.

A section of the pier-head 50 feet long was built 19 tiers high and a section 100 feet long to a height of four tiers.

The expenditure during 1903-04 was $11,629 including $10,700 on contract and $939 for inspector's services.

The total expenditure to June 30, 1904, was $17,695.23.

CHOCKFISH RIVER.

Chockfish river, Kent county, empties into Northumberland straits, about midway between the entrances to Richibucto and Buctouche harbours.

A sand beach extending from the north has rendered the entrance to the river circuitous and shallow. To produce a straight and deeper channel and safer entrance for fishing boats, the construction of a dam was begun in the autumn of 1901 to close the new channel 400 feet south of the original river mouth. It was built from the mainland a distance of 130 feet, the channel shifting outward around its end at the same time. The dam consists of a rubble mound 7 feet wide on top laid on brush mattrasses, through which were driven two rows, 7 feet apart, of piles spaced 5 feet centre to centre longitudinally.

In 1902-03 construction was commenced on the sand beach and continued shorewards to meet the old work, and an extension of 27½ feet long of lighter construction was built at the inner end of the latter, giving the dam a total length of 356½ feet. At the same time a trench was cut through the beach, about 300 feet north of the dam, which, under the influence of spring freshets, enlarged to a channel about 70 feet wide

with 8 to 9 feet of water at spring high tides, making a considerable improvement over the old channel.

During 1903-04 a breakwater was built running south-easterly from the northern side of the new mouth. It consists of an inner length of 48 feet, formed of posts and cross-ties (8 bents) to carry a light tramway, with brush and stone between to catch the drifting sand. A length of 348 feet constructed of 2 rows of piles 6 feet apart centre to centre each way with caps and two walings of 10 x 10 timber, filled between with brush and stone with a slope on the seaward side, and an outer section 120 feet long, constructed of three rows of piles, the outer row being driven close together and the two inner rows 6 feet apart longitudinally, with cross-ties 10 x 12 and 4 walings of 10 x 10 and 12 x 12 timber. The width over all of this part is 11 feet 6 inches. The interior is filled with brush and stone with the exception of 12 bays which still require an additional foot of stone. The outside face is also to be protected with a brush and stone slope for which sufficient stone has been procured.

The expenditure for the year 1903-04 was $1,993.80.

The total expenditure on this work to June 30, 1904, was $4,764.89.

CLIFTON.

Clifton (Stonehaven), Gloucester county, a station on the Caraquet Railway, is situated on the southern shore of the Baie des Chaleurs, 18 miles east of Bathurst, the shire town of the county, and 8 miles west of Grande Anse.

A breakwater at Stonehaven, originally 425 feet long and constructed by private persons, was acquired by the department in 1878, and during the same year was extended 325 feet, making a total length of 750 feet. The outer 220 feet is placed at an angle of 72 degrees with the inner portion and the whole constructed of round and square timber cribwork filled with stone and partly protected along the northern and eastern faces by a stone talus. The harbour affords shelter for fishing vessels, and for schooners engaged in the export of grindstones, &c., the depth at low water being 7 to 8 feet. Spring tides rise 7 feet.

During 1886-87, 1887-88, between 1891-93 and again in 1897-98 and 1898-99, general repairs were made to the work, and a portion of the northern and eastern faces were protected by large stones of from ½ to 1 cubic yard in bulk.

In 1899-1900, two openings in the eastern face, 16 and 19 feet wide, were closed and other repairs were made; materials were also procured for the construction of a block 70 x 40 feet at the western end of the breakwater, for the purpose of preventing the stone placed along the northern face from being swept around the end during easterly storms. During 1900-01 the timbers for the proposed block were framed and the old work was repaired for a length of 103 feet.

In 1901-02, the top of the outer 200 feet of the breakwater was stripped and new longitudinals, cross-ties and covering placed; a tramway was built along the northern face; 719 cubic yards of stone were placed along the northern and eastern faces, and minor repairs made to cap, fenders and face timbers. The substructure of the new block, 70 x 40 feet of close-faced cribwork, was also constructed 11 tiers, or 9 feet 2 inches high, and successfully placed at the western end of the breakwater.

During 1902-03, the new block was completed, the total height being 17 feet 6 inches. It is covered with 6-inch plank, with 12 x 12 caps and 10 x 10 fenders, with three iron straps at each corner. Thirteen 10 x 12 fenders, 15 feet long, were placed along the northern face of the old work and 900 cubic yards of large stone deposited outside the same face.

During 1903-04 a new break was constructed along the northern face of the L, and consists of two tiers each of cross-ties and longitudinals with stringers and 4-inch covering, the width being 6 to 6½ feet. The outer face of the wharf received four tiers of 10 by 12-inch timbers laid close, and continued the whole length of the northern

face for a length of 223 feet. The turn-table, at the end of the tramway, was raised to the height of the new break and the tramway rails along the eastern face of the approach were graded to the new height by means of extra ties over a length of 120 feet. The interior of the new break was filled with ballast. This work replaces an old break constructed of face-timbers and knees which was much out of repair. The outside face was also strengthened by the addition of thirty-four fenders.

A ramp 17 feet 6 inches wide and 17 feet long of cross-ties, stringers and 6-inch covering and filled with ballast, was built on the western end of the L to enable teams to ascend to the new pier-head.

741 cubic yards of large stone were deposited on the northern and eastern faces of the work.

The expenditure for the year 1903-04, was $2,289.50.

The total expenditure to June 30, 1904, was $293,075.94.

CROSS POINT.

Cross Point, Restigouche county, is situated on the north shore of the Restigouche river, opposite the town of Campbellton, N.B.

In the year 1902-03 the sum of $10,045 was authorized for the construction of a landing pier at that place. The contract was awarded in March, 1903.

During the year 1902-03 the sum of $6,907.97 was expended on the work.

During the year 1903-04 the contract was completed and the amount expended during the fiscal year was $3,137.03.

EDGETT'S LANDING.

Edgett's Landing, in Albert county, is on the west side of the Petitcodiac river, two miles below the village of Hillsborough.

To replace an old provincial government work, destroyed by the Saxby gale in 1869, the construction of a wharf was begun twenty years later by the department, and was finally completed in the fiscal year ended June, 1903. The wharf is 400 feet long, composed of an earthen approach 20 feet wide, and 50 feet in length ; round timber cribwork 250 feet, and square timber cribwork 100 feet long. The head is 40 feet wide. Spring tides rise 46 feet. The pier head, 35 feet high, stands in 30 feet at high water and is dry at low water.

Renewal of the covering, which had become decayed, and levelling up of the stringers, which had settled, was begun in May, 1900, and was completed in 1900-01.

During the fiscal year 1903-04 the approach, 270 feet long, was raised above tide level with brush and gravel, protected on each side by stone. Thirteen broken cross-ties were replaced with new ones 12 feet in length ; slight repairs were made to the covering and two new mooring posts 15 inches in diameter were placed in position.

The total expenditure to June 30, 1903 amounted to $9,930.95.

The expenditure during the fiscal year 1903-04 was $410.

FORT DUFFERIN.

Fort Dufferin, St. John county, built by the imperial government to command the western entrance to St. John harbour, stands on high ground immediately above the end of Negropoint breakwater. In order to preserve from erosion by the waves the headland crowned by the battery, this department began in 1882 at tide level a retaining wall of sheathed cribwork 430 feet in length, and in the following year constructed a further length of 303 feet. The work is exposed on the one hand to the force of the waves, and on the other hand to land slips.

In 1886-87, it was much disturbed by the sea and repairs were made in that and the following years, 205 feet of the original work being rebuilt. From 1887 to 1889 repairs were also made, and in 1890 the work was extended 100 feet.

General repairs were made in 1893-94. The work is from 7 to 14 feet wide on top, and about 9 feet in mean height. The crest for the whole length is surrounded by a break 2½ feet high.

During the year 1896-97, a gap 81 feet long in the break was repaired, and the sheathing was patched at intervals along the face with hardwood planking. In order to raise the beach, and so protect the lower part of the face, toward the end of 1896, a groyne 40 feet long, 10 feet wide and 4 feet in average height, was built of hardwood piles, timber and stone. In 1897, extension of the cribwork a distance of 130 feet was begun, and by the end of the fiscal year had been brought within two tiers of the full height.

In 1897-98, the new extension was completed, ballasted and sheathed. Small repairs were also made to the sheathing of the old work.

In 1898-99 four groynes, in all 232 lineal feet, each built of hardwood piles spaced 4 feet apart, driven from 9 to 12 feet into the bottom and planked with birch 9 inches square, securely strapped and bolted, were placed along the beach to protect the lower part of the sheathing of the breast-work; some ballast was also placed in the cribwork.

Ordinary repairs comprising restoration of a breach in the face, ballasting and renewal of the sheathing, were made during the year 1899-1900.

In 1900-01, the face was sheathed for 145 lineal feet; ten piles were driven to restore, with the addition of cribwork, a breach 11 feet long. At the upper end, the breast-work was repaired for a distance of 235 feet.

In 1902-03, the face of the breast-work was protected with close piling for a length of about 178 feet. An extension of the protection was made for a distance of 94 feet by driving close piling, secured with double walings and stiffened by bracing fastened to piles driven 13 feet in the rear. The inside of this work was partially filled with brush and stone.

During the fiscal year 1903-04, a new block, 70 feet long and 20 feet wide of close-faced cribwork, was built at the inner end of the breast-work. The cap of this block is flush with the break of the old work. The total expenditure to June 30, 1903, amounted to $26,671.64.

The expenditure during the fiscal year 1903-04, was $3,499.66.

GRANDE ANSE.

Grande Anse, Gloucester county, a station on the Caraquet Railway and a fishing and farming settlement with a population of between 700 and 800 inhabitants, is situated on the southern shore of Baie des Chaleurs, twenty-five miles north-east of Bathurst, and fifteen miles west of Caraquet.

For the purpose of affording shelter to the fishing boats of the locality and others frequenting Baie des Chaleurs, the department, in 1876, commenced the construction of an isolated breakwater placed between 500 and 600 feet from the shore, and subsequently extended it to a length of 397 feet, 159 feet of which forms a shore arm, and the remaining 238 feet a head, nearly at right angles to the former with a sloping face of 1 to 1, on the north or seaward side.

To give increased protection to the fishing boats, a contract was entered into during 1901-02, with J. W. Dumas, for the construction of an extension of close-faced cribwork 250 feet long, 21½ feet wide, and from 10½ to 13½ feet high to extend from the inner end of the present work shoreward, and also for the removal of material consisting of sand, mud and stones which had accumulated inside the harbour formed by the original work.

At the close of the fiscal year 1901-02, the extension was constructed an average height of 7½ feet on a length of 264 feet, the required length of the work at the bottom, and 30 cubic yards of material had been removed from the area required to be dredged.

During the year 1902-03, the extension was completed and 1,470 cubic yards of material were removed by dredging. Repairs were also made to the old work during

the year, viz.: driving six fender piles and rebolting seven loose ones on the north side, inserting five new face timbers, 10 yards of ballast, renewing part of the sheathing in a length of 20 feet of the sloping face, placing a ladder and close fendering 20 feet of the inner face.

During the fiscal year 1903-04, the remainder of the dredging required by the contract with J. W. Dumas, was completed with the exception of 800 cubic yards which could not be removed by any local dredge as the material was too hard. As the required depth had been attained over the area most in use, a settlement was made with the contractor by payment of the amount remaining due on the contract price, $10,900, less $480, for dredging not performed.

Repairs were also made at the north angle of the old work where, for a length of 27 feet, the sloping face had been carried away leaving intact the original vertical face of the wharf. Twenty-three new fenders laid close were placed to strengthen the old face. The bay, 12 feet long, of the sloping face adjoining the break, was strengthened by placing an extra set of cross-ties inside and at the end, which was also protected by close fendering, extra longitudinals inside and by filling it with ballast.

The total expenditure for the year 1903-04 was $2,515,69 of which $2,180 was under the contract, $65 for inspection and $270.69 for repairs.

The total expenditure to June 30, 1904 was $34,031.11.

HOPEWELL CAPE.

Hopewell Cape, in Albert county, near the mouth of the Petitcodiac river, and at the head of deep water navigation, is one of the several works on that stream intended for the convenience of shipping. For the use of vessels proceeding to Moncton, Hillsborough and Dorchester for cargoes, the department in 1883 began the construction of a ballast wharf of round timber cribwork, 300 feet in length and 22 feet wide, which was completed in the following year. In 1885, the work was extended to the present length of 583 feet by an addition built of square timber. The covering, stringers, and other upper timbers having become decayed, preparations were made in 1899-1900 (the appropriation being very small) for repairing the work, by the purchase of materials. By the end of that year a part of the timber had been delivered.

In 1900-01 the outer end for a length of 283 feet, was rebuilt for a height varying from 4 to 6 feet. The top of the pier-head was also rebuilt.

By a fire, which destroyed part of the village of Hopewell Cape, the top of the inner end, 300 feet long, of the ballast wharf was burnt. The fire obtained lodgment in the decayed internal timbers of this work, and was with some difficulty extinguished in time to save the outer end of the wharf, which is built of square timber cribwork.

During the fiscal year 1903-04, the burnt timbers of the ballast wharf were removed, and the square timber cribwork was rebuilt from 3 to 6 tiers to the level of the stringers.

The round timber cribwork was also rebuilt to the height of 2 tiers and was brought up to the level of the under side of the stringers, the voids under the lower ballast floor being filled with stone. On the north side, the footing stones of a new slope were placed for 70 feet and one tier of the slope was laid for the same distance. On the south side of the work, the footing stones were laid for a length of 54 feet ; while the first tier of the slope stones was carried 33 feet and the second tier 10 feet in length. The brush mattrass, on which the slope is being placed, was laid for 200 feet, the full length.

The total expenditure to June 30, 1903 amounted to $10,767.82.

The expenditure during the fiscal year 1903-04 was $4,641.83.

HOPEWELL HILL.

At Hopewell Hill, in Albert county, on Shepody river, an arm of the Petitcodiac, a contract was let in 1900-01 for the erection of a new public wharf of round timber

cribwork. Construction was commenced in June, 1901, and the work was completed in November of the same year. The wharf, 101 feet in total length, consists of a stone approach 24 feet long and 30 feet wide on top; 2 blocks, each 20 by 40 feet, and two intervening spans of 15 feet. The blocks are of open cribwork, planked on top, and fendered on the sides.

In the fiscal year 1902-03, a right of way to the wharf, 66 feet wide, was acquired, and a road, 500 feet long and 20 feet wide on top, composed of alternate layers of brush and clay, was built. The road, which is outside the dykes, is altogether in embankment, the fill being 10 feet in maximum depth. The work comprehends 2,216 cubic yards of brush and clay in about equal parts. In the deepest part of the filling, a culvert 32 feet long was built.

In 1903-04, a bed for vessels to ground upon at low water, 73 feet long, 25 feet wide and 10 feet high at the outer end, was made of cribwork, brush and clay, on the lower side of the wharf.

The total expenditure to June 30, 1903, amounted to $4,603.14.

The expenditure during the fiscal year 1903-04 was $244.56.

LITTLE SALMON RIVER.

Little Salmon river, a tidal inlet of the Bay of Fundy, 14 miles east of Quaco, in the county of St. John, is the site of a mill producing lumber to the value of about $25,000 annually. At this place, spring tides rise 30 feet. The beach protecting this little haven, being in danger of denudation, a protection work, 430 feet long, with a groyne 92 feet long, of piles and planking extending along the crest of the beach, was built during the fiscal year 1902-03.

A heavy storm scoured the beach below the level of the protection, and having carried away the groyne, two streaks of planking were added and the groyne was rebuilt during the fiscal year 1903-04.

The total expenditure to June 30, 1903, amounted to $714.48.

The expenditure during the fiscal year 1903-04 was $634.78.

LORD'S COVE.

Lord's Cove, Charlotte county, a small fishing station on Deer island, is a port of call for steamers plying between St. Stephen, St. Andrew's, Eastport, and other points in Passamaquoddy bay. To afford facilities for this steamer, the construction of a wharf was begun in 1900-01. Spring tides rise 24 feet.

The wharf, without the approach, is intended to be a pile and trestle work, 328 feet long and 21 feet wide, with a pier-head 33 feet in height.

During the fiscal year 1902-03, this wharf was extended to the back of the pier-head, a length of 120 feet, by driving 12 bents and by completing the laying of the covering and the cap. A gallows-frame, ladder and flight of steps were also made, in order that the public might make immediate use of the wharf.

The work was then 289 feet long, exclusive of the stone approach, 28 feet in length.

In 1903-04, the pierhead (50 by 40 feet) was built, to which 17 fenders and 58 short braces yet remain to be applied. The work is now 328 feet long and 21 feet wide, with a pierhead 35 feet in height. The wharf is approached by a stone embankment, 28 feet long, and a rock cutting 61 feet in length.

The total expenditure to June 30, 1903, amounted to $3,000.

The expenditure during the fiscal year 1903-04 was $1,050.

MISCOU.

Miscou harbour is at the extreme northern end of the county of Gloucester, between the Shippegan islands and Miscou island, on the eastern entrance from the Gulf of St. Lawrence into Baie des Chaleurs.

At low water the harbour has an area of about five square miles, it is well protected from the prevailing winds and has good anchorage. The main entrance into the harbour is from the Baie des Chaleurs, on the west, where a channel 5 to 7 fathoms deep can be found. The eastern entrance from the Gulf of St. Lawrence, is known as Miscou Gully, which is a narrow passage left between the beaches extending from the two islands.

The population of Miscou island is about 500, occupied chiefly in fishing, seventy-five fishing boats are owned in the island and eleven lobster factories have been established.

The exports for 1902 amounted to $75,000 (chiefly lobsters, herring and codfish) and the imports $50,000.

In order to afford landing facilities on the harbour front for the inhabitants of Miscou island, the department entered into a contract, on April 27, 1904, with Messrs. Burns & Charleson, for the construction of a wharf, at this place. The wharf will consist of a shore block 200 feet long by 20 feet wide, seventeen blocks each 20 feet square and eighteen spans of 20 feet, and a pierhead, 40 x 30 feet, placed in 3·8 feet of water at low water ordinary spring tides. The contract price is $13,700. Spring tides rise 6 feet.

Construction had not been begun at the end of the fiscal year 1903-04.

Expenditure in calling for tenders, &c., $73.72.

MISPEC.

Mispec is situated on the north shore of the Bay of Fundy, eight miles east of St. John, in the county of that name. Near the outer end of a narrow cove, which receives the discharge of Mispec river and constitutes the harbour, the department built on the west side in 1885 a breakwater, 197 feet long, 25 feet in mean width and 30 feet high at the outer end.

Repairs were made in 1889-90 to the seaward face, and again in 1892-93. In consequence of the establishment at this place of a pulp-mill, capable of producing 40 tons per day and employing 150 hands, repairs to the work were begun in 1898-99, when a sum of $800 was expended in procuring materials ; in replacing seven tiers of the face for a distance of 74 feet along the work with heavy birch timbers, 16 inches square, secured by screw bolts, and in ballasting the work.

The breakwater was, however, found insufficient for the protection of the rafts of pulp wood and also of the schooners and lighters engaged in carrying coal, sulphur and limestone to the mill, or in transporting pulp when manufactured from the mill to St. John for shipment. On this account, a contract for a new breakwater to be placed on the east side of the entrance was let in 1900-01. In the same year preparations for the foundation of this work were begun by benching the rough rock, at expenditure of $743.57.

In 1901-02, the new breakwater, 168 feet long, 34 feet wide on top, 50 feet wide at the bottom, and 30 feet high at the outer end, was completed.

At the same time, the original work on the west side was repaired and raised to the same height as the new breakwater ; 79 feet of the sloping face were sheathed with 6-inch spruce plank ; a new set of longitudinals was laid for part of the length of the work, and a new set of cross-ties, stringers and covering for the whole length. The outer and inner faces were constructed of square timber for a height carrying between two and six tiers, and the inner face, outer end and outer face were fendered. Additional ballast was also placed in the whole of the work.

In 1903-04, new longitudinals of heavy birch were placed for a distance of 70 feet in the sloping face, on which new spruce sheating was laid. Eleven new fenders were placed on the outside of the work, a ladder was made, the sloping face was strapped with iron and the wharf was ballasted.

The total expenditure to June 30, 1903 amounted to $26,213.

The expenditure during the fiscal year 1903-04 was $991.68.

NEGROPOINT.

Negropoint, St. John county, is a headland about 60 feet above high water mark at the western entrance to St. John harbour, which is formed by the estuary of the River St. John on the northern side of the Bay of Fundy. Spring tides rise 25:33 feet. Neaps 15 to 20 feet.

In addition to convenience of position for distribution by rail of cargoes landed at the city of St. John, the harbour is remarkable principally for great tidal range, and for consequent freedom from ice in the winter months. The harbour is open, broadly speaking, from south-east to south-west, waves are mitigated by Negropoint breakwater, while the Foul Ground, a shoal tailing down from peninsula on which the city is built, must have more or less effect in moderating the force of the easterly seas rolling round Mispec Point.

By Partridge Island, a rocky eminence devoted to quarantine and lighthouse purposes, the entrance of St. John harbour is divided into east and west channels. In the former or main channel, a minimum navigable depth of 19 feet is found on the bar at low water at ordinary spring tides. Two hundred yards inside the crest of the bar, a depth of five fathoms is obtained in the narrow fairway, while higher up and between the most southerly of the principal wharfs on either side of the harbour (450 yards wide at that point), twelve fathoms are given in mid-channel. The west channel 10 to 14 feet deep at low water, and originally 120 yards wide, has been contracted to about as many feet in breadth by Negropoint breakwater, which extends 2,200 feet SE. by S. from the headland so styled.

The reasons for undertaking this work are thus stated in the reports of the Minister of Public Works for 1875 and 1882 :

1875. This breakwater extends south-easterly from Negropoint at the western entrance of St. John. When completed it will extend a distance of 2,500 feet, closing up the west channel to that extent, leaving, however, a width of 1,100 feet between the outer end and Partridge island. The object is to break the force of the seas which roll into the harbour of St. John during the south-west gales in the Bay of Fundy, and which render it dangerous and almost impossible at such times for vessels to make the harbour.

1882. South-westerly winds threw in a heavy sea through the western channel which renderd it difficult for vessels to make the harbour, as they were in danger of being carried on the Foul Ground on the eastern side of the channel. In the spring of 1875, a breakwater 2,250 feet long to partially close the western channel was begun, and in September, 1877, completed.

Reference to the chart will show that as long as the present opening remains, the object of the breakwater has been only partially fulfilled. In dealing with the reduction of the bar, a more cogent reason than improvement of shelter may be found for the extension of the work to Partridge island.

The breakwater consisted at first of a cribwork core, 30 feet wide at the base, and 15 feet wide at the top (5 feet above high water ordinary spring tides), protected on both sides by large stones sloping to seaward at the rate of two to one, and landward at the rate of one to one. In the month of February, 1879, thirteen hundred lineal feet of cribwork were swept away to a depth varying between 13 and 19 feet from the top, the stones having been raked down by the wave-action to a slope more nearly resembling the angle of repose of the material. In 1880, temporary repairs were made, and in 1881 a contract, completed six years afterwards, was entered into, whereby the lost cribwork was replaced by heavy stones and the seaward slope made three to one. Even this flatter inclination proved too steep for stability; consequently, notwithstanding their size, the stones, though smoothly laid, were soon displaced by the sea. A length of 50 feet of the breakwater extending at full height beyond a masonry pier, built under the same contract to support a beacon, was also swept away. From 1891 to 1894, desultory repairs were made by the addition of large stones, chiefly deposited about the end to prevent the lighthouse from being undermined.

In May and June, 1895, four large blocks of concrete were placed for the purpose in front of the base of the pier. In 1895-96, seven concrete blocks, founded about the level of low water neaps, were built in situ round a quadrant of the outer end to receive the foot of a slope proposed to be made of heavy granite blocks laid at the rate of four to one. The concrete blocks were from 59 to 91 tons each in weight, all but the heaviest being laid in one tide. The granite pier was also reinforced by a semi-circular skin of concrete 7 feet in average thickness and strongly battered, placed round the front, and brought to the level of high water spring tides. The footing blocks were 15 feet long, 12 feet wide and unless varied for the sake of foundation, three feet high in the face, sloping upward at a rate of four to one on the top. Each block was free to settle independently, but all were keyed together by splayed concrete joggles. Inside a part of the space within the quadrant, stones of the original work added to small granite were assembled and grouted, as far as funds permitted. This course was taken in default of the heavy granite (which would require special plant) necessary for the slope of this breakwater, where height is the great disideratum.

Pending consideration of works necessary for deepening the entrance to the harbour, which might possibly involve the extension of the breakwater, nothing more was done during the year 1896-97, except the completion of the break at the shore end, than appeared requisite to protect the unfinished superstructure just begun, and to preserve the lighthouse.

To this end fifteen blocks of concrete, forming aprons, were laid in position at the outer end of the work, between October 1896 and June 1897. A quantity of stone which had been swept round the point of the breakwater from the seaward to the harbour side was also replaced in position. Some of this stone was laid outside the heavy footing blocks, built in the previous year, and some was applied to restoration of the crest of the work at the back of the lighthouse. Breaches carried below the level of high water had been made by the sea at five or six points in the rubble mound between the lighthouse and the shore. An illustration of the violence of the seas which assail Negropoint breakwater is afforded by the removal of a stone, which weighed five tons, a distance of 76 feet in one winter. A marine dynamometer secured to the masonry of the lighthouse records the wave-force at 4,000 pounds and upwards per square foot.

In order to retain for natural protection, along the seaward face of the work, the littoral drift formerly swept by the waves over the top into the harbour, a break of piles, brush, stone and timber, 270 feet long, 8 feet wide and 4 feet high, begun in 1895, was completed in 1896-97, and was also extended 140 feet along the timber work that year with good effect. As a result of the construction of the break, the foreshore has advanced seaward, while the beach has increased in height and breadth.

Besides the general accretion of the beach, a tongue of drift, observed after the erection of the break to be near the shore, has at the foot of the talus on the seaward side, travelled 200 yards or more toward the outer end of the breakwater.

The formation of this spit, generally 10 feet wide and 2 feet high against the work, indicates that the drifting sand, gravel, shingle, &c., which formerly went over the breakwater into the harbour, will in time afford important natural protection to the work, and will reduce the length of the face to be maintained.

During the year 1897-98, as a measure of precaution, 152 yards of granite were obtained and deposited about the lighthouse for protection during the winter, while stones previously removed by the sea were replaced in position.

The advance of the foreshore rendered necessary in that year the enlargement of the timber break, which was extended a distance of 80 feet along the breakwater.

A small groyne was also built for the purpose of obtaining some information as to the quantity of the littoral drift near the shore end. To preserve the timber, the top of the piles and the knees of the break were given two coats of pitch.

One thousand and nineteen cubic yards of granite were supplied and laid in place in 1898-99; while 285 yards of the original stone of the work, displaced by the sea, were restored in position.

During 1899-1900, 414 cubic yards of granite were delivered and placed round the lighthouse. Six hundred and six cubic yards of dislodged stone were put back. Five concrete blocks, containing 52·1 cubic yards, were also laid in place.

In 1900-01, five blocks of concrete, aggregating 54½ cubic yards, were built in situ; 1,313 cubic yards of new granite were received and placed, while 1,893 cubc yards of the original stone of the breakwater, removed by the sea (which on November 8, 1900, made two clear breaches through the work) were restored to position. The timber break was also extended two tiers for a distance of 40 feet.

During the year 1901-02, 4,694 cubic yards of large stone, principally granite, together with 719 cubic yards of small stone, were delivered and placed in position. A number of large stones of the original work, amounting to 1,713 cubic yards, which had been dislodged by the sea, were restored to place by means of a floating steam derrick. Repairs were also made to the derricks and buildings.

During the fiscal year 1902-03, 4,603 cubic yards of large and 600 cubic yards of small stone, were delivered and placed at Negropoint breakwater. This material was chiefly applied to restoring the point of the breakwater to the original length; that is, by extending it 50 feet beyond the light-house. Although the stones were of large size, averaging a little less than 1½ cubic yards (while some attained the bulk of 5, 6 and even 7 cubic yards each) a part of the restored point was swept away by the heavy storms of the winter. Besides the new material added to the work, 2,201 cubic yards of the original stone of the breakwater, which had been dislodged by the sea, were, by standing or floating derricks, shifted and replaced either on the point of the breakwater or in the gaps made in the crest. The covering of the cribwork was also patched in places, the plant overhauled, and a derrick for hoisting boats erected near the shore end.

Until the work has either been extended to Partridge island or has received a permanent superstructure, constant repairs will be required.

In 1903-04, 12 blocks of concrete, aggregating 417 cubic yards, were made in place. Before the concrete was made, 124 cubic yards of large stone, taken from another part of the work, were placed round the lighthouse for protection. The break was raised 2 feet in height for a length of 175 feet.

The total expenditure to June 30, 1903, amounted to $515,256.61.

The expenditure during the fiscal year 1903-04 was $12,153.83.

PARTRIDGE ISLAND.

Partridge island is a rock eminence standing at the mouth of St. John harbour, and dividing the entrance into east and west channels. The island is devoted to quarantine and lighthouse purposes.

At the northern end of Partridge island, two narrow piers of cribwork, built many years ago, give shelter to the boat landing at the station. Between them, a substantial block of new cribwork, 50 feet long and 22 feet wide, begun and nearly finished in 1896-7, as a foundation for the disinfecting house, was completed in the succeeding year. A boat slip, intended for use at low stages of the tide, was partially built, a new mooring post put in, and minor repairs to the end of the west pier were made at the same time.

In the fiscal year 1902-03, the west pier of Partridge Island, 121 feet long and 17 feet wide, was raised by the addition of one tier of cross-ties, new stringers, covering and cap. A house 14 x 24 feet, was built for the boat of the medical officer and a new derrick (excepting the mast) was made for the purpose of launching or landing the boat, the weather being too rough in the winter to allow it to lie afloat.

From the east pier, 110 feet long and 20 feet wide, 11 fenders were removed and were replaced by new ones. The break was strengthened by the addition of 7 new knees ; the boat-shed was shifted ; the derrick rebuilt and a new cap laid. The top was also covered throughout with two thicknesses of 2-inch plank.

During the fiscal year 1903-04, the approach of round timber cribwork, to these piers was reconstructed. This part of the work is 75 feet long on the centre line, 16½ feet wide on top and 14 feet high, with an additional platform 17 x 18 feet. The top was covered with hemlock plank and a hand-rail was put up round it. Ballast floors 30 feet in length, composed of double deals, 3 inches thick, were placed in the west pier and covered with 4 feet of ballast. Five bays of the inner face were sheathed to prevent the loss of ballast, for a height of 8 to 18 feet, and the ballast, which had been washed into the slip and obstructed the boat landing, was removed.

The total expenditure to June 30, 1903, amounted to $6,777.39.

The expenditure during the fiscal year 1903-04, was $500.

PETIT ROCHER.

Petit Rocher, Gloucester county, is a farming, fishing and lumbering settlement on the south-western side of Baie des Chaleurs, 12 miles above Bathurst.

On May 31, 1904, a contract with Mr. Simon McGregor, of Dalhousie, was signed for the construction of a breakwater at Petit Rocher.

The work will consist of a main breakwater 209 feet long on the outside and an L placed at an angle of 74° 30′ with the main part, 160 feet long on the outer face. The width on top will be 30 feet. At the nearest point the breakwater will be 450 feet from the shore and it will lie in from 12 to 19 feet of water at low water ordinary spring tides.

The contract price is $32,900.

Construction had not begun up to the end of the fiscal year 1903-04.

Expenditure in calling tenders, &c., $351.65.

POINTE DU CHENE.

Pointe du Chêne, Westmoreland county, lies on the western side of Northumberland straits, on the south-east side of Shediac harbour. It is the terminus of a branch line of the Intercolonial Railway and of the steamer 'Northumberland,' running during the season of navigation from Summerside, Prince Edward Island.

The works at Pointe du Chêne consist of an inner and outer breakwater, each 600 feet long, with an opening between of 80 feet, and a ballast wharf (so-called) 200 feet long, connecting the outer breakwater with the Intercolonial Railway wharf.

During 1902-03, repairs were made to the outer breakwater, as follows : 6 pieces of loose boiler plate at the foot of the sloping face were removed and 50 lineal feet of face timbers inserted, over which, the 6 boiler plates and 3 new ones were laid; 2 fender-piles were driven and 3 pieces of sheathing of the sloping face were renewed. Chocks were inserted behind 12 fender-piles which had started out from the work and the tops of fenders projecting above the top of the work were cut off. The covering and stringers on a length of about 50 feet, damaged by a storm in the autumn of 1902, were removed and piled.

During the fiscal year 1903-04 repairs have been in progress on the damaged section of the outer breakwater, where, for a length of 109 feet, the old covering was removed, and the stringers were secured and covering relaid over a length of 31 feet. For 72 feet, on the outer face, the face timbers, sheathing, cross-ties and longitudinals were removed to near low water level, and the cross-ties replaced at intervals of 5 feet instead of 10 feet, as formerly ; double face timbers, inner longitudinals, and stringers placed, and all the timbers of the face strongly screw-bolted together. Fifty feet of new covering was also laid on this section. The 72-foot portion has been raised 2 tiers higher than before and levelled; a further length of 80 feet was filled with ballast.

The expenditure during the fiscal year 1903-04 was $1,746.68.

The total expenditure to June 30, 1904, was $82,941.49.

QUACO.

Quaco, St. John county, is on the northern coast of the Bay of Fundy, about 30 miles to the north-eastward of the entrance to St. John harbour. The bay is semi-circular, and lies open to the south-east, between Quaco Head and Macomber Point, some 2 miles apart, the breadth from a straight line drawn between these capes being about a mile. At the mouth of a small river discharging into the eastern end of the bay, a harbour of refuge has been formed by the construction of two piers, the eastern work 310 feet and the western 302 feet long. The harbour is dry at low water, and is only accessible for about six hours during each tide, to the coasting vessels which come to load timber or to seek shelter. Spring tides rise 30 feet; neaps, 23.

In 1896-97, repairs were made to the west pier for a distance of 149 feet, the sheathing of the sloping face, and several face-timbers being renewed with birch, 14 inches square, secured with screw-bolts, and a quantity of ballast being replaced. A couple of fenders and a ladder were also added. At the same time, the east pier was protected from the scour of the stream by brush and stone, 13 new fenders were applied, and the decayed tops of five others were replaced by sound material. Small repairs were also made to the covering and sheathing, and another ladder was provided. The whole expenditure in that year amounted to $1,377.51.

In 1897-98, a sum of $50 was applied to closing a small opening and strapping the angle of the west pier, which had been struck by a schooner.

In the fiscal year 1902-03, the sloping face of the east pier was reconstructed for a length of 70 feet, the outer end being 10 tiers in height, and the inner 7 tiers high.

In 1903-04, the repairs to this face were completed and were extended for an additional length of 19 feet, the whole being covered with sheathing. Four new mooring posts were inserted; a new corner fender was placed and the cap and covering received minor repairs. Some pieces of sheathing were also placed on the west pier.

The total expenditure to June 30, 1903, amounted to $38,994.66.

The expenditure during the fiscal year 1903-04 was $450.08.

RICHIBUCTO.

Richibucto, Kent county, lies on the eastern side of Northumberland straits, about midway between the entrances to the Miramichi bay and Shediac harbour. It is the shire town of the county, a deal port and a terminus of the Kent Northern Railway.

The entrance to the harbour is between two sandy beaches known as 'North Beach' and 'South Beach.' The works originally proposed for the improvement of the harbour were two breakwaters, one to extend from the southern point of the North beach 1,200 feet, and the other to run in a north-easterly direction from the south beach, the object being to confine the water to one permanent channel and so scour the bar at the entrance.

In 1873 and 1874, the north pier was constructed for a distance of 1,200 feet. In 1876 it was found that the sea, during easterly storms, followed the inside of the breakwater, whirled around the upper end and endangered the beach. From 1880 to 1882, protection works were extended westward along the face of the beach to prevent erosion. Extensions in the same direction were continued during the years 1888, 1889, 1890 and 1891, for lengths of 200, 300, 94 and 140 feet respectively, making the works a total length of 2,158 feet, composed principally of brush, stone and piling.

Repairs to the inner part of the eastern section were undertaken during the years 1898-99, and at the end of June a section of 238 feet in length was nearly reconstructed, and another 593 feet partly repaired and raised 3 feet.

In 1899-1900, the work commenced during the previous year was completed. Off the harbour face a pile, brush and stone groyne, 33 feet long and 15 feet wide, was constructed, and another of the same length rebuilt. Off the inner face two brush groynes each 191 feet in length were built, and off the northern face of the breakwater, near the outer end, a new breast-work 470 feet long and 8½ feet wide, consisting of pile frame work, sheathed on the outside and filled with brush and stone, was constructed.

In 1900-01, a steam derrick was built for pile driving and handling large stone, three additional stake and brush groynes, aggregating 262 lineal feet, were built off the inner face of the eastern section and a protection work 26 feet wide and variable in height, consisting of mattrasses (formed of fascines and evergreen brush) pierced with piles and weighted with stone, was commenced on the harbour side of the outer section, 1,180 feet inward of the outward end and partially built outward for a distance of 492 feet.

In 1901-02, work was resumed in August with a view to continuing the protection work of the previous year a total distance of 866 feet, or out to within 300 feet of the outer end, and from the latter point, building an extension of 315 feet in length running in a south-easterly direction. One hundred and thirty feet of the extension was partly built and then, owing to the difficulty in procuring materials, work was closed down at the end of September. Plans were prepared and tenders called for the completion of the work.

The protection work is similar to that commenced during the previous year while the extension consists of brush mattrasses placed on the bottom, weighted with small stone, pierced by three rows of piles, driven 5 feet apart longitudinally and 4 feet transversely, and finished with large stone, forming a top 12 feet wide and sides sloping 2 to 1.

In February, 1902, a contract was entered into for the completion of the unfinished extension and protection as above. Work was commenced in the latter part of May and at the close of the year four mattrasses, 60 x 26 feet, had been placed for the protection work. Twenty piles were driven in the extension and 295 cubic yards of stone were delivered and placed in the work.

During the year 1902-03, the contract work was continued, and at the close of the year had been completed with the exception of delivering and placing about 855 cubic yards of slope and 350 cubic yards of core stone, adjusting some portions of the laid slope and filling in voids between the large stones.

Slight repairs were also carried on during the year by day labour, viz., protecting with brush and stone three sections at the back of the old work (immediately to the westward of that under contract) from undermining, the first section 50 feet long and 7 feet wide, the second 60 x 5 feet, and the third 70 x 3 feet. A quantity of stone left piled on one of the sections of the work was evenly distributed over a length of 600 feet and the tops of 150 piles and portion of the break timbers were given a coating of tar.

The contract work was completed on November 30, 1903, and the final estimate amounted to $21,793.43, being the contract price, $22,900, less $1,106.57, for materials supplied to the contractors by the department.

The expenditure during the fiscal year 1903-04, amounted to $583.

ST. JOHN RIVER AND TRIBUTARIES.

The River St. John, proper, 450 miles long, takes its rise from sources in the province of Quebec and the state of Maine, at a reputed maximum altitude of 2,159 feet above sea level. Entering New Brunswick at the confluence of the St. Francis, a little below the borders of Quebec, it continues to be the international boundary almost to Grand Falls, and after flowing through the province for nearly 300 miles (by way of

the counties of Madawaska, Victoria, Carleton, York, Sunbury, King's and Queen's) discharges into the Bay of Fundy at St. John. Many tributaries, some being of considerable magnitude, are received by the main stream. Among them are the St. Francis, Madawaska, Green River, Grand River, Salmon River, Nackawick, Eel River, Keswick, Nashwaak, Oromocto, Jemseg, (Grand Lake), Washademoak, Belleisle and Kennebecasis. Except the last five, which are slightly tidal for some distance, they are fresh water streams.

The total basin from source to mouth is computed to be 26,000 square miles, an area almost equal to the whole of New Brunswick, but as a part of the watershed lies outside, only a little more than one-half the province is drained by the river. The St. John is considered navigable for vessels 15 feet in draught for a distance of more than 50 miles from the mouth, but no positive information on this point has yet been obtained. About 8 feet at low water can be carried to Fredericton, 84 miles from the sea, and 6 miles below the head of tide at Springhill. Three natural features of the river are remarkable ; viz.:—

The tidal falls ; Grand falls, and the annual floods.

Although in summer the fresh water stream between Woodstock and Fredericton is in places 400 to 1,000 feet wide, expanding at the latter place after reaching the tidal level to half a mile in breadth ; yet the actual mouth of the river, a rocky gorge 400 yards long, immediately at the head of St. John Harbour, measures but as many feet across at high water. Here at low water, the level of the river is from 11 to 25 feet above the sea, and as the ordinary tides flow from 23 to 27 feet, the sea level at high water is from 8 to 13 feet higher than the waters of the river. Thus there are two falls at every tide ; viz.: one outward and one inward, and vessels can only pass when the waters of the ocean and the river are on a level. This occurs only for a space of about 10 minutes during each ebb and flow of the tide ; at all other times it is either impassable or extremely dangerous. (Admiralty Sailing Directions).

At Grand Falls, 223 miles from the sea, the whole volume of the river plunges over an almost perpendicular face of limestone 60 feet high, into a deep ravine 250 feet across, somewhat similar to the narrow pass at St. John. Flanked for nearly a mile by lofty rugged cliffs, the confined current dashes from the foot of the falls with excessive strength, mining deep pot-holes in the rocky bottom of the channel in the course of a further descent, estimated to be slightly less than the first. In the Harbour of St. John, ordinary spring tides are considered to rise 25½ feet. At the wharfs of the river steamers, a mile above the falls, while summer range is about 3 feet, the highest flood mark is given as 17 feet above extreme low water. At Oromocto, 73 miles from the sea where the tidal range is from 10 to 12 inches, the flood of 1887 reached a bridge 20 feet above low water. At and over, 200 miles from the sea, floods attain an elevation of more than 27 feet above summer level. By contrast the Tobique and St. Francis swell 9 and 6 feet respectively. After the first spate, due to the melting of the snow in the catchment basins of the Kennebacasis, Belleisle bay, and Washademoak, a secondary flood occurs, caused by the back water of the main river, which is fed from sources further north, and consequently later in thawing.

The harbour of St. John is open all the year around, but the river is ice-bound from November to April, an average period of 144 days. The water usually begins to rise in April, reaching flood pitch early in May, and maintaining a high level for two or three weeks. By the middle or end of July, the water has fallen to summer level, a stage lasting, with some variations dependent upon the rain fall, for about 60 or 70 days.

In addition to a little coal, a considerable quantity of cord-wood, and the ordinary food supplies yielded by the farms of a lengthly fertile valley, the trade of the river comprehends an abundance of valuable timber, fluctuating each season in amount, but generally at least equal to 135 million superficial feet annually. Most

of the logs are floated loose down the tributaries and upper river to Fredericton, some being manufactured there and shipped coastwise or to the United States. The remainder, or major part, is towed from the provincial capital to St. John in rafts, giving employment to a fleet of tugs.

For the purpose of works, three divisions may be made of the river.

1. Tidal Navigation, for steamers and sailing vessels between St. John and Fredericton, 84 miles, requiring 11 feet at low water. Principal obstruction : the Oromocto shoals, about 1½ miles ; the middle ground above Oromocto island, about 1 mile ; and the shoals abreast Fredericton, rather more than ½ mile in length. The last are now dredged, but the other obstacles remain.

2. Inland Navigation, from Fredericton to Woodstock, a distance of about 65 miles, requiring 3½ feet at low water. The obstacles to inland navigation, besides boulders in some places, and perhaps bed rock at Meductic, are shoals of material more or less coarse, according to the strength of the current, varying in composition from sandy gravel to stones. The chief bars are at Springhill and Bear island ; while Knapp's, Perley's, Coac, Nackawick, Belvisor, Moore's, Bett's, Dibblee's, and Bedell's Bars with Meductic rapids, constitute lesser obstructions, according to present information. Dividing above Springhill into two main channels, and from a general width of 350 yards opening to a stretch of 1½ miles between banks with a water-way increased by at least one-third, the river becomes dotted with eyots and shallows, two gravel shoals, known as the Russel and Chapel Bars, together, about ½ mile in length, compose the obstacle at Springhill. At Bear Island, 25 miles above Fredericton, in consequence of another division of the river into three channels aggregating 600 yards in breadth, a shoal of gravel and stones 1 mile long, giving 21 inches at low water, has been formed. Besides dredging, a long training dyke will be necessary for the maintenance of this channel. After reuniting below the island, the width of water-way in single channel is only 250 yards.

3. The Upper river, including with the tributaries all that part above Woodstock. This division is now used for the passage of timber only. On some of the tributaries beyond the reach of railways, supplies for the lumber camps are transported in tow boats, for which channels are required to be made and tow-paths provided.

Tidal Navigation.

The tidal compartment of the River St. John comprehends, besides the main stream navigable by steamers which run daily between St. John and Fredericton, a distance of 84 miles, four tidal arms, all navigated by wood boats and regular passenger steamers, the extent of the whole tidal navigation being as follows :—

Main River St. John	84 miles long.
Kennebecasis	24 "
Belleisle Bay	12 "
Washademoak Lake	27 "
Grand Lake and Salmon River	35 "
Total extent	182 miles.

For the convenience of the steamers and other craft navigating the main river and its branches, the provincial government has erected a number of wharfs, towards which the department has made contributions amounting to one-half the certified cost.

During the year 1901-02, assistance was given to a number of these wharfs, $3,000 being available for that purpose; while in the fiscal year 1902-03, $4,813.14 was applied to the same object.

A contract was signed on January 22, 1903, for the construction at Oromocto of a public wharf, which was begun and completed in 1903-04. The new wharf is of round timber cribwork, 300 feet in total length, with an approach 20 feet wide on top, battered at the rate of 1 to 1 to the upper side, and sheathed. The pierhead is 70 by 35 feet on top. The work is filled with ballast. A road 130 feet long, was made from the old wharf to the new.

The expenditure during the fiscal year 1903-04 was $6,558.75.

Inland Navigation.

Between Fredericton and Woodstock during the fiscal year 1903-04, rocks were removed from the shore at ten landing places used by the steamer 'Aberdeen,' viz.:— Burden's, Hazelton's, School-house, Kirke's, Moore's, Grosvenor, Hamilton's, Oldham's Eddy, Meducric, Woodstock.

Besides some earth, 94 cubic yards of large stone and 299 cubic yards of small stone were removed.

The expenditure amounted to $394.04.

Tobique river, Victoria county. Between Plaster Rocks and the Forks, a distance of 34 miles, channels 50 feet wide and 2 feet deep, aggregating almost 2 miles in length, were made for the passage of tow-boats through 22 shoals, viz.:— Nicholas, Cumliffe, Loup Cervier, Long Island, Caribou, Diamond Island, Robinson, Gaunce's, Blue's Island, Harris Island, Knowlton, Everett, Cameron, Gilbert Blue, Blue Mountain Brook, Jenkins, Haley Brook, Swift Island, Mink Cove Island, Barker.

Tow-paths were also cut for 120 rods, while stumps and trees along the bank were cut and removed wherever necessary.

The expenditure amounted to $857.

Little Tobique river, Victoria county. On the little Tobique, improvements to facilitate the passage of tow-boats were made by clearing channels through seven bars, varrying from 100 to 300 feet in length. These channels were made 25 feet wide and 2 feet deep below low water level. Five tow-paths, one-fourth of a mile in length and 16 feet wide, were also cut, and large trees, constituting obstructions to towing, were removed by blasting. The improvements extended from Tobique Forks to Red Brook, a distance of about 26 miles.

The expenditure amounted to $399.

Serpentine River, Victoria county. On the Serpentine, 13 rocks were blasted from McCarthy's Falls, and as many more between that and Little Falls. Thirty-five boulders, equal to 60 cubic yards, were also removed by blasting between the head of Dead Water and the dam at the foot of Serpentine lake, a distance of 10 miles. A pier at Serpentine Falls, 20 feet long and 14 feet high, was sheathed with 6-inch birch. A new pier, 64 feet long, 50 feet wide and 9 feet high, was built at the islands at the foot of the falls ; and another, 40 feet long, 20 feet wide and 8 feet high, partly ballasted, was built at the head of Dead Water, 2 miles above the falls.

Main River below Aroostock, Victoria county. In the main River St. John, near the month of the Tobique, rocks which were impediments to the passage of logs, were blasted. From one rock a portion, 60 feet long, 22 feet wide and 2 feet high; from another a portion 90 feet long, 45 feet wide and 7 feet high; and from a third a part 30 feet long, 24 feet wide and 2 feet high, were removed. A tow-path 650 feet long and 10 feet wide, was also cut on the east side of the river below the Tobique rocks. In this a culvert of cribwork was built with a 10-foot opening.

The expenditure amounted to $299.82.

Main River, Victoria county. Between the mouth of Salmon river and the Aroostock, 33 cubic yards of rock were removed by blasting at Baker's Reef, and 147 cubic yards at Little river.

The expenditure amounted to $200.

Grand Falls to Salmon River, Victoria county. Between these points, fifteen rocks, containing 148 cubic yards, were removed by blasting.

The expenditure amounted to $200.

Grand Falls, Victoria county. At Grand Falls, the whole of the River St. John takes a sudden plunge of 80 feet into a narrow gorge. At the foot of the falls, an eddy, which retains a great deal of the timber passing over, is formed by a projecting point of rock. To reduce the eddy, a considerable part of the point has been removed. In June and July, the blasting covered an area of 100 feet long and 80 feet in extreme width at the base, the average depth of rock being 12 feet. In August and September, 109 cubic yards of rock were blasted from the same place.

The expenditure amounted to $900.

In former times, a jetty had been constructed above the falls to deflect the current to the east side, and to throw the logs clear of the eddy below. A work of similar character was built during the fiscal year 1903-04, a little nearer the falls. This cribwork pier is 208 feet long on the centre line, is 30 feet wide on top and stands 4 feet above flood level.

The expenditure on this work amounted to $4,710.07, making a total during the year at Grand Falls of $5,610.07.

Grand River, Madawaska county. Improvements were made on this river for a distance of fifteen miles. The work consisted in removing an old dam two miles from the mouth, in cutting tow-paths 12 feet wide and in clearing the river from obstructions.

The expenditure amounted to $250.

Green River, Madawaska county. On the Little Forks of Green river, 30 cubic yards of rock were removed by blasting, and a cribwork pier, 50 feet long, 15 feet wide and 6 feet high, was built at the second falls of Little Forks about two miles from the mouth. At this point, fourteen rocks, containing 158 cubic yards, were removed by blasting, and a tow-path, 748 feet long and 20 feet wide, was cut round the falls.

The expenditure amounted to $250.

Iroquois River, Madawaska county. The Iroquois discharges into the St. John two miles below the town of Edmunston. At the falls of the Iroquois, fifteen miles above the mouth, the improvements made during the year consisted in building a dam, 68 feet long and 4½ feet high; a pier, 16 feet high and 11 feet wide; and another pier, 60 feet long, 7 feet high and 5 feet wide, all of round logs ballasted with stone. For the passage of timber a sluice 85 feet long, 6 feet high and 10 feet wide, was also made.

The expenditure amounted to $275.76.

Edmunston, Madawaska county. In the town of Edmunston for protection from the effect of the floods occasionally caused by the back water of the St. John, a cribwork dyke, 413 feet long, 15 to 16 feet high, 14 feet wide at the bottom and 9 feet at the top, was built and ballasted.

The expenditure amounted to $4,909.81.

St. Francis, Madawaska county. On the St. Francis, channels 15 feet wide and 2 feet deep, were excavated through the following shoals :—

Grew Bar, 175 feet long; Hab's Bar, 330 feet long and two at Jones' Bar, 330 feet long.

At Cross Lake Rapids, a channel, 300 feet long, 15 feet wide and 2 feet deep, was made by the removal of rocks. A tow-path 16 feet wide, was cut round Glacier lake, a distance of five miles.

The expenditure amounted to $300.19.

Exclusive of the cost of dredging, the total expenditure on the River St. John to June 30, 1903, amounted to $152,545.34.

The whole expenditure for the fiscal year 1903-04, including $794.31 for the pay and expenses of the permanent foreman of the upper river was $16,788.94.

SHIPPEGAN.

Shippegan Gully, Gloucester county, a passage between Shippegan island and the mainland, is situated on the western side of the Gulf of St. Lawrence, and is distant 3 miles south-east of Shippegan village, the terminus of the Caraquet Railway, and 65 miles east of Bathurst, the shire town of the county.

To improve the entrance to the harbour, the department in 1875 commenced the construction of a breakwater on the eastern side of the gully, and a dam 890 feet long to close what is known as the eastern gully, distant three-fifths of a mile eastward of the main gully.

From 1875 to 1890, the works were confined to the eastern side of the entrance, and at the latter date consisted principally of a pier or breakwater at the point, and a breastwork along the northern face of the beach, the whole having a length of 1,200 feet, one-third of which was constructed of cribwork and the remainder of brush and pile works.

In 1880-81 and in 1883, the dam was repaired, raised and strengthened, and during the latter year the pier was also repaired and extended 120 feet.

General repairs were again made during 1883-84 and 1886-87. In 1888-89 the work was further extended 50 feet by the construction of an additional block at the outer end.

During 1890-92 a contract was entered into for the construction of a breakwater 1,194 feet long, off from the western beach, consisting of a pile work filled with brush and stone; 137 feet of the outer portion of the eastern work was rebuilt at the same time.

In 1892-93 and 1893-94, repairs were continued, and in 1897-98 plans were prepared and general repairs to all the works undertaken. These were continued until the winter of the following year, during which time the dam was raised 3 feet over a distance of 452 feet and extended westerly 185 feet. An apron of brush and stone 375 feet long was also built on the south side of the dam, and on the northern side 10 rows of stakes or hand piles were driven, forming groynes for the purpose of arresting the drift of seaweed and sand, thus stopping the leaks, and at the same time protecting and strengthening the dam. Between the dam and Fruing & Co.'s fishing establishment, 4 hurdles, 155 feet in total length, 2 pieces of brush, stake and gravel work, one 12 x 60 x 3 feet, the other 13 x 46 x 4 feet, were constructed in order to preserve the beaches and confine the roadway to one course. Eastward of Fruing & Co.'s establishment, a pile-bent structure, 120 feet long, filled in with brush and stone, and a further length of 119 feet of brush and stone alone was built, to close an opening in the harbour side of the beach. Near the inner end of the east pier, 63 feet of pile-bent work was constructed, and between this work and the pierhead, one branch of 22 feet, one of 62 feet and another of 70 feet, were closed with pile-work filled in with brush and stone. A gap of 90 feet in the pier-head was closed by the partial construction of a close-faced cribwork block and a pile structure, each 45 feet in length, and other minor repairs were made. On the west side of the gully, 62 piles were driven at the outer end of the breakwater, and 180 feet refilled with brush and stone. Along the west beach, a breastwork 1,669 feet long of stakes, piles, brush and gravel, was constructed to close runnels and raise the crest of the beach, and an opening of 43 feet between sand dunes was closed with stakes, brush and gravel.

During 1899-1900, the gap of 90 feet in the east work was completed; 455 feet were reconstructed with fascines, brush and stones. One pile groyne, 26 feet long, was built on the harbour side of the work, and another, 220 feet long, on the seaward side, with brush, stakes and gravel. The dam was raised 3 feet with brush and stone for a distance of 495 feet. An apron 476 feet long and 8 feet wide was placed along the southern side, and an extension of 17 feet was made to the eastern end, from

which latter point, a groyne, 180 feet long, of stakes, brush and stone, was constructed nearly at right angles to the dam.

In 1900-01, a new pile pier-head, 44 x 34 feet, was built at the outer end of the eastern work, and breastworks, 200 feet and 92 feet long respectively, were built on the outer and inner sides of the breastwork, built the previous year on the west beach. One hundred and ninety feet of the breakwater was sheathed horizontally on the harbour side between high and low water, the interior of the work was strengthened by braces and an extension of 100 feet was made to the inner end.

During 1901-02, on the east side, the outer block of the breakwater was ballasted, one pile-groyne 48 feet long was constructed and another partially so. The work to the east of Fruing & Co.'s was sheathed with 3-inch deals, and between this and the dam, a distance of 1,826 feet, a beach protection work was built. The dam was raised 3½ feet over a distance of 350 feet. On the west side the outer 130 feet of the breakwater was strengthened with braces, piles were driven at its outer end, horizontal sheathing was placed for a further distance of 130 feet on its eastern side, and the outer 30 feet was partially filled with brush and stone. Also, on the harbour side of the breakwater, a groyne 88 feet long was constructed, and an extension of 175 feet was made to the inner end by driving close-piles, backed with brush and stone.

During 1902-03, on the east side, a gap 121 feet long, immediately to the east of Fruing & Co.'s was closed with a work built of piles, brush and stone. Two new groynes, each 40 feet long, were built, and two increased in height. On the west side, the breastwork of stakes, brush and gravel, was extended westerly 1,200 feet, and slight repairs were made on the western breakwater.

During the fiscal year 1903-04 : On the east side, two groynes, one 40 and the other 29 feet long, were built on the harbour side of the work, with piles faced with 6-inch hardwood ; two groynes, whose outer ends had been raised by the ice, were shortened 12 and 8 feet respectively; 500 feet of light breastwork, formed of posts in two rows 8 inches apart, filled between with brush, was built on the seaward side, to cause an accumulation of sand; 37 feet of the same construction was built as an extension to the work on the harbour side to the east of Fruing & Co.'s establishment, and the cross-ties of the second block from the end of the east breakwater were levelled preparatory to being covered with plank.

On the west side, 875 loads of sand and gravel were carted to fill a low spot beside the breastwork on the west beach, where the tide was working through. The ends of three groynes which had been raised by the ice, were cut off for 30, 10 and 15 feet respectively. Fifty pieces of new plank were laid on the western breakwater. Its outer corners were strengthened by the addition of 6 iron straps and 60 cubic yards of brush and 40 of stone were placed on its outer end.

A survey of the entrance and channel within the gully has lately been made, by which it is found that the depth at the entrance is gradually increasing. At the commencement of the works the depth was only 3¼ feet, in 1898 it was nearly 6½ feet, whereas at the present time about 8 feet is found at low water spring tides.

The expenditure for the year 1903-04 amounted to $1,097.85.

The total expenditure to June 30, 1904, was $88,054.29.

TRACADIE.

Tracadie, Gloucester county, is situated on the Gulf of St. Lawrence, about midway between Shippegan Gully and the entrance to Miramichi bay. Its harbour is one of the several large lagoons on the east coast of New Brunswick, separated from the sea by long sandy beaches and entered only by narrow channels termed gullies. The harbour of Tracadie is entered from the Gulf of St. Lawrence by what is known as the 'north' and 'south' gullies.

The harbour is some six miles in length by a quarter to one mile or more in width, but except in the river channels (north and south Tracadie rivers) and in the channels entering from the gullies, it is quite shoal, being almost dry at low water spring tides.

In 1894, in order to provide shipping facilities for the district, which is a large and populous one, containing upwards of 2,000 inhabitants, the department constructed a wharf 1,430 feet long and 25 feet wide, consisting of blocks and spans as follows :— A shore block or approach 250 feet long, twenty-eight blocks 20 x 25 feet, a pierhead or outer block 40 x 25 feet, and twenty-nine spans or openings of 20 feet. The work was constructed of open cribwork of round timber and the top covered with 3-inch plank.

During 1900-01 a cribwork block 55 feet long and 27 feet wide on top, lying immediately beyond the outer end of the departmental work, was repaired and connected with the main structure which was also repaired.

During the year 1901-02, the laying of diagonal covering for a width of 10 feet was continued and completed over a distance of 1,318 feet.

During the fiscal year 1903-04, repairs were again necessary, as eight of the blocks had parted above the ballast floor during an unusually high tide, being raised from 3 inches to 1 foot. From seven of these the ballast was removed and they were set back into place and secured with iron rods hooked around the timbers below the ballast floor and bolted to the timbers above. The eighth block which was only slightly displaced was merely secured with rods.

In addition 200 cubic yards of ballast was placed in the work and twenty-four fenders, 425 lineal feet of cap timbers, 65 lineal feet of 3-inch covering 25 feet wide, and 19 lineal feet of 2-inch covering 10 feet wide, were renewed.

The expenditure for the fiscal year 1903-04, was $844.66.

The total expenditure to June 30, 1904, was $7,163.04.

TYNEMOUTH CREEK.

Tynemouth creek, St. John county, twenty-one miles east of the city of St. John, is one of the several small havens, dry at low water, found on both shores of the Bay of Fundy which are only useful on account of the high range of tide. Tides rise here about 28 feet. Inside a beach of gravel and stones, is a tidal basin, accessible to small vessels at high water by an opening at the east end of the beach.

In 1874-75, the department built a substantial cribwork pier on the rocky foreshore of the eastern cliff to prevent vessels from taking ground on that side.

In 1882-83, another work to maintain the channel was built on the point of the beach on the opposite side.

In 1894-95, a sum of $225 was applied in replacing some of the fenders and covering of the east pier and to removing part of the rocky ledge obstructing the channel.

In 1897-98, a sum of $510 was expended in removing 813 cubic yards of shingle from a shoal obstructing the entrance, and in effecting minor repairs to the west pier.

The harbour is constituted by a long beach stretching from the western side of the inlet. By heavy gales, the crest of the beach was cut down almost 5 feet for a length of 300 feet.

In 1900-01, to prevent this beach from being lowered and the harbour from being endangered, a protection work of piles and planks from which three groynes 41 feet long, projected, was built for a length of 345 feet.

At the cribwork groyne of the west pier, a block 68 feet long over all, and 16 feet wide, repais were made for a length of 52 feet ; new ballast floors were inserted ; new ballast was placed in the work; and the top was given new stringers, and in great part, new covering, besides ten new fenders. The remainder of the covering of the west pier was also patched in places.

At the east pier, chocks were inserted between started face-timbers to retain the ballast ; 13 new fenders were placed and the break was repaired.

During the fiscal year 1903-04, the main body of the west pier was raised 2 feet for a length of 116 feet ; was ballasted for a depth of 5 feet, and was newly covered. The spur of the west pier was also raised two tiers, ballasted and covered ; while the inner end was levelled up and raised one tier. Three new fenders were added to the east pier, and loose fenders were bolted. The road approaching this pier was also repaired for a distance of about 50 yards. The shoal obstructing the entrance to this harbour was removed, the channel being made 45 feet wider and 2 feet deeper than before by removing the bar for a maximum length of about 300 feet.

The total expenditure up to June 30, 1903, amounted to $8,241.57.

The expenditure for the fiscal year 1903-04 was $1,001.

UPPER SALMON RIVER.

Upper Salmon River, otherwise called Alma, the terminus of the Albert Southern Railway, is situated in the county of Albert, 5 miles from Rocher Bay, and 2 miles from Herring Cove. From Alma, deals are either sent in coasting vessels to St. John for shipment, or are transported directly to sea-going vessels lying at the anchorage off Grindstone island, or in the roadstead off Herring Cove. For protection of the coasters lying inside the river-mouth at the private wharfs, which afford 4 or 5 berths, the department built in 1883-4 a breakwater which was extended to a total length of 420 feet. By position the work lies across the path of the littoral drift. In consequence, the foreshore has advanced nearly 500 feet on the weather side, and the drift, having fully charged the outside of the breakwater, is now working round the end. Accordingly, inside the point of the breakwater a bar 11 feet in height was formed which extended nearly across the mouth of the river. By means of a temporary groyne, inducing scour, the channel, which had become cantracted to a width of only 34 feet, was increased during the months of April and May, 1900, to 125 feet in breadth, but the shoal was soon formed again.

On August 6, 1902, a contract was let for the construction of an extension 104 feet in mean length and 30 feet wide on top, of close face cribwork, with a sloping face on the weather side of the breakwater. By the end of the year excavation for the foundation had been made and the timber work begun.

By the end of the year 1903-04, the work had been brought up to the 23rd tier or 4 feet below the level of the finished top.

The total expenditure to June 30, 1903, amounted to $11,384.70.

The expenditure for the fiscal year 1903-04 was $3,455.

WILSON'S BEACH.

At Wilson's Beach, a fishing settlement in a slight indentation of the coast on the west side of Campobello, an island in the Bay of Fundy forming part of the county of Charlotte, a breakwater 373 feet in length was built to shelter the cove by the joint contributions of the federal and local governments between the years 1874 and 1878. The outer arm of the breakwater having become dilapidated, and the cove having been silted up, preparations were made in 1899-1900 to restore the inner end 284 feet in length, and the repairs were nearly completed in the following year, 1900-01. A quantity of materials was also procured for the construction in deeper water of the dismantled outer end.

In 1901-02, the repairs to the inner end were completed. Crib No. 1 of the part to be reconstructed, 80 feet in mean length and 36 feet wide, consisting principally of hardwood timber, was built, placed in position and ballasted. Crib No. 2, 74 x 40 made of similar materials, was also begun and at the end of June had been built to a height of 8 tiers. A quantity of timber was also delivered.

In the fiscal year 1902-03, crib No. 1 was increased 130 feet in length on the outside and raised at the inner end to the 26th, and at the outer to the 23rd tier. Crib No. 2 was brought up to the 23rd tier.

In 1903-04, the superstructure of crib No. 1 was completed; while the top of crib No. 2 was brought up to the full height with the exception of the benching required to be left for making the connection with crib No. 3, which was begun and brought up to the 10th tier in height.

The total expenditure to June, 30, 1903, amounted to $30,678.69.

The expenditure for the fiscal year 1903-04 was $8,055.15.

PROVINCE OF QUEBEC.

AMHERST.

Amherst village is situated at the eastern end of Amherst island, one of the Magdalen islands, in the Gulf of St. Lawrence, and forms part of the electoral district of Gaspé.

Amherst is a port of considerable importance. Two steamers plying between Pictou, Souris and the Magdalen islands call twice every week at Amherst landing pier.

The landing pier commenced at Point Shea in May, 1900, and built to a length of 188 feet during the fiscal year 1901-02, was extended 250 feet during the fiscal year 1903-04, making it together with the 50 feet built from the outer face of the roadway to the side of the cliff a total length of 488 feet, with an average width of 26½ feet and an average height of 25 feet. The outer end of the wharf stands in 17 feet at low water spring tides.

The whole is built of cross-face cribwork protected every 8 feet by hardwood fenders. For the whole of the superstructure from 3 feet below low water mark, birch face-timbers, 12 x 12 inches were put in the work.

The cribwork substructure settled down from 4 to 6 feet in sand and clay. On the outside or easterly side a quantity of ballast stones had to be placed so as to prevent the undertow from undermining the work.

The approach of 625 feet in length built in May and June, 1901 being altogether too low and too narrow, and besides having been partly carried away had to be rebuilt, widened to an average of 26 feet and raised to 8 feet above low water mark, the top being levelled with sand and gravel.

The expenditure during the last fiscal year is $4,476.32.

ANSE À BEAUFILS.

Anse à Beaufils, in the county of Gaspé, is on the Gulf of St. Lawrence, six miles south of Percé.

The sum of $496.80 was expended towards the removal of rocks from the harbour.

ANSE AUX GASCONS.

Anse aux Gascons, is situated on the north shore of Baie des Chaleurs, in the county of Bonaventure.

During the year 1903-04 the sum of $2,765.50 was expended for the construction of an approach to the breakwater at this place.

ANSE DU CAP.

During the last fiscal year the sum of $100 was expended towards the removal of rocks from the harbour of Anse du Cap, in the county of Gaspé.

ANSE ST. JEAN.

Anse St. Jean, is situated on the north shore of the River Saguenay, twenty-five miles above its mouth.

The public landing pier at this place was commenced by the local government in 1876, and continued by federal government in the years 1879-80, 1880-81.

Total expenditure since confederation, $4,752.63.

Paid by the local government and municipality, $1,700.

In 1881-82, the upper part of the pier was completed at the expense of $1,091.72, the pier is 366 feet in length 26 feet in breadth up to the head which is 50 by 40 feet and 33 feet in height. At low water spring tides there is a depth of 7½ feet at the outer end of the pier.

1884-85, the pier was repaired. Expenditures, $94.45.

During the year 1886-87, the sum of $865.28 was expended on the construction of a movable slip, building an open shed 40 by 28 feet and renewing part of the flooring.

In 1890-91, the portion of the wharf which settled in the spring of 1889, was raised from 2½ to 3 feet over a length of 135 feet and the flooring renewed, a quantity of stone was placed in the eastern portion of the wharf and the shed was repaired.

Expenditure, $999.42.

During the years 1892 up to 1897, repairs were made, the flooring completed and the eastern face of the cribwork was sheathed with an expenditure of $1,963.75.

During the fiscal year 1899, a landing slip was built on the eastern side of the pier, the slip is 75 feet long at the base, 25 feet on the top and 14 feet wide, filled with stone ballast, the planking of the pier was renewed on a length of 200 feet at a cost of $1,000.27.

In 1899-1900, 50 feet of the outer end was sheathed, and 200 feet of flooring was renewed with 3-inch spruce and the shed was painted.

Expenditure, $501.

During the year 1902-03,the work done consisted of general repairs to the flooring, a new slip, sheathing and repairs to the shed.

Amount of expenditure, $657.91.

During the fiscal year of 1903-04, a pier 24 feet in length by 50 feet in width and 34 feet high, was sunk in 13 feet depth at low water spring tides. The pier is built of round logs open-faced, with fenders of 8 by 10 inches every 8 feet and sheathed on the two outer corners with 8-inch timber.

The stringers 10 by 11 inches, are ready to receive the flooring.

Spring tides rise 17 feet; neaps, 10 feet.

Amount expended is $3,048.04.

Total amount expended to July 1, 1904, was $17,190.02.

BAIE ST. PAUL.

Baie St. Paul, is situated on the north shore of the St. Lawrence, in the county of Charlevoix, sixty miles below Quebec.

During the fiscal year 1903-04, extensive repairs were made to the west side of the wharf where the face timber had been broken by ice during a heavy storm. In the spring of 1903, the damage extended over a length of 125 feet and 12 feet high.

A number of large boulders were also removed from the channel leading to the wharf.

The expenditure during the fiscal year, 1903-04, was $3,279.66.

BELŒIL.

Belœil is an incorporated village in Verchères county, on the north side of the Richelieu river, and a station on the Grand Trunk Railway, 21 miles north-east of

Montreal. It has an express office, one store, two hotels, one saw mill and the works of the Hamilton Powder Company. Population, four hundred. The Richelieu river leaves Lake Champlain at its northern extremity, and after a course of 80 miles, enters the St. Lawrence at Sorel. It is broader and more rapid in the former than in the latter part of its course. The Richelieu forms an important part of the navigation between the St. Lawrence and the Hudson river.

South of the Grand Trunk Railway bridge, which crosses the river at Belœil, the government built a number of piers and booms on both sides of the channel to facilitate the passage of steamers and barges coming down the rapid current of the river and going through the narrow passage of the draw-bridge, and to prevent them from being carried away into shallow water. There are eight piers, or four on each side of the channel, distant from 80 to 100 feet from one another. From 1885 until 1888, some slight repairs were made to the booms at a cost of $353.43. In 1890-91 three of the piers were rebuilt from the water line and some slight repairs were made to the booms at a cost of $1,500.35. In 1891-92, two other piers were rebuilt from the water line at a cost of $1,193.38. In 1895-96 some slight repairs were made to the booms at a cost of $144.79.

In 1896-97, it was found that the guide piers on the west side of the river, built many years ago, were in such a bad condition, that they could not be properly repaired, and an entirely new line of guide works was adopted. It was decided to build a solid crib-work wall from the Grand Trunk Railway pile abutment upwards, following the line of a 15-degree curve for a distance of 337 feet; to remove the four old piers and booms, and to dredge a wider channel for the free passage of boats.

The work carried out by days' labour, was not completed on June 30, 1904.

The expenditure during that fiscal year was $1,261.50.

BERGERONNE'S WHARF.

Bergeronnes, Saguenay county, is on the north shore of the River St. Lawrence, 18 miles below Tadousac.

This place contains, one church, post office, telegraph office, four saw-mills and two cheese factories.

During the year 1903-04, a landing wharf was commenced in the River Grandes Bergeronnes; it is to be 20 by 30 feet, and 17 feet high, built of open face round timber cribwork and ballasted with stone.

Spring tides rise 16 feet; neaps, 9 feet 6 inches.

The amount expended was $239.30.

BERTHIER.

The village of Berthier, in the county of Montmagny, is on the south shore of the River St. Lawrence, 29 miles below Quebec.

A large traffic in farm produce is made through the coasting steamer 'Champion,' which plies daily between Quebec and Berthier. Spring tides rise 21 feet; neaps, 13 feet.

During the fiscal year ended June 30, 1904, the sum of $447.96 was expended in sheathing the east side of the shore end of the wharf, on a surface of 3,270 sq. feet, with tamarack 3 inches thick ; the top planking was also repaired.

BOIS BRULÉ.

Bois Brûlé, county of Gaspé, is a small fishing cove some five miles below or south of Douglastown.

As the beach for the landing of the boats was wearing away, a training pier was decided upon. The pier is to be 90 feet long, 22 x 22 feet wide and 12 feet high. Sixty feet of the outer end of the pier has been built.

The expenditure at the end of the last fiscal year was $1,704.24.

BONAVENTURE EAST.

Bonaventure East, is in the county of Bonaventure. During the year 1903-04 a contract was let to build a breakwater at this place for the sum of $15,690. It is to be 700 feet long by 20 feet wide.

The work done at the end of the fiscal year 1903-04 amounted to $5,000.03, and was not completed.

BON DÉSIR.

Bon Désir, in the municipality of Les Bergeronnes, is situated on the north shore of the St. Lawrence, at five miles east of Les Bergeronnes village.

The Bay of Bon Désir is much frequented by schooners loading cordwood and timber, the entrance to the bay is obstructed by boulders, some of the most dangerous of which were removed.

The amount expended was $191.

CACOUNA.

Cacouna, one of the best known and most frequented summer resorts in Canada, is situated on the south shore of the St. Lawrence, in the county of Temiscouata, 120 miles below Quebec.

Spring tides rise 20 feet ; neaps, 12 feet.

During the fiscal year ended June 30, 1904, an addition to the wharf was built ; the crib is close-faced, filled with stone ballast, 75 feet in length, 30 feet wide, on a mean height of 19 feet. The work was done by day labour, during the months of October and November, at a cost of $2,298.35.

CAP DE LA MADALEINE.

Fifty dollars were expended towards the removal of some 60 cubic yards of shale along the beach on the west of the outlet of the Madeleine river, county of Gaspé.

CAP DES ROSIERS.

The sum of $101.19 was expended towards the removal of 20 cubic yards of solid rock and 100 cubic yards of large boulders, so as to allow fishing crafts to come ashore in safety, at Cap des Rosiers, county of Gaspé.

CAP SANTÉ.

Cap Santé, the chief town of the county of Portneuf, is situated on the north shore of the St. Lawrence, five miles below Portneuf and thirty-one miles above Quebec. Spring tides rise 14½ feet, neap tides, 8½ feet.

During the fiscal year 1903-04, minor repairs to the amount of $16.20, were made to the wharf at this place.

CHAMBORD.

Chambord, in the county of Chicoutimi, is situated on the south-east side of Lake St. John.

Chambord is the junction for the Quebec and Lake St. John Railway, of the Roberval and Chicoutimi branches.

During the fiscal year, a certain quantity of timber was purchased in view of the construction of a wharf at this place.

The amount expended was $1,541.67.

CHAMPLAIN.

Champlain, a post village in Champlain county, situated on the north shore of the River St. Lawrence, on the Canadian Pacific Railway, 15 miles east of Three Rivers. It contains a Roman Catholic church, 2 telegraph offices, 9 stores, 2 hotels, 1 saw-mill, 1 butter factory, &c. Distance from station to village 1½ miles. Population of village, census of 1890, 810; of parish, 1,180.

With a view of affording much needed facilities, by water-way, to the trade of the surrounding localities, it was decided to build a public wharf at that place.

In May, 1904, the old wharf of Mr. H. Arcand, together with a piece of land about ½ arpent in area, on the shore of the river, and a right of way from the public road to the wharf, was purchased for the sum of $1,000. On June 30, materials consisting in timber, lumber, stone, crushed stone, iron, cement, &c. had been procured for the sum of $4,628.07.

CHICOUTIMI.

The town of Chicoutimi, in the county of the same name, is situated on the south shore of the Saguenay river, 71½ miles above Tadousac, at the head of navigation. The Richelieu and Ontario Navigation Company's boats call two to six times a week at the Chicoutimi pier during the season of navigation, with passengers, freight and mails.

At the mouth of the River Chicoutimi, about 1 mile above the pier, there is an extensive lumbering establishment belonging to the Messrs. Price Bros., who export large quantities of sawed lumber, laths and shingles, to Europe and elsewhere, in ocean vessels and large schooners which ascend the Saguenay to the town. There is also the Chicoutimi Pulp Company, which has two pulp mills of a capacity of 78,000 tons a year, the Chicoutimi Pulp Company loads every year an average of 20 steamers.

Construction.—The landing pier was commenced in 1873 by the St. Lawrence Tow Boat Company, and completed by the Dominion government to whom it was handed over in 1874, at a cost of $14,193.40. From 1874 to 1882 inclusively, it was extended and improved at a total cost of $2,863.73. The pier was then 282 feet long, and consisted of an approach 248 feet long and 30 feet wide, and of a head block 34 feet long and 127 feet wide forming two wings respectively, 70 feet and 27 feet wide. On the upper or 70 feet wing was a combined waiting room and an office 20 feet square.

The depth of water at the end of the pier which was originally 10 feet at low water spring tides, was then reduced to 7 feet by the accumulation of slabs and sawdust from the mills at the mouth of the Chicoutimi river.

In 1883 the shore end portion of the approach on a length of 38 feet was embedded in an embankment upon which the station and sheds of the Chicoutimi branch of the Quebec and Lake St. John Railway are now erected. The length of the approach was thereby reduced to 210 feet by filling in with slabs the whole space, 210 feet in length, between the upper or 70 feet wing and the shore, and a storehouse 40 feet long and 24 feet wide was erected on this extension at a total cost of $2,145.84. The filling was not however carried up to the level of the top of the pier until 1885, when the extension was floored in a manner similar to the rest of the work. A separate waiting room was also erected on the lower or 27 foot wing.

The amount expended was $2,042.11.

In 1890, a cribwork retaining wall 14 feet wide was commenced along the slab filling built in 1884, and the flooring was repaired where required at a total cost of $1,005.81.

In 1891, the cribwork retaining wall was completed, a shed 28 by 29 feet built at the southern end of the pier and the flooring was repaired at various places at a cost of $1,802.70.

In 1897 the pier was again widened by the addition of cribwork 30 feet wide along its lower or eastern face, from the lower or 27 foot wing to shore, a distance of 210 feet. The cribwork was fully ballasted and floored with 3-inch tamarack planks and twenty-five fenders were placed along its face.

The pier was also sheathed for a length of 50 feet along its northern face in order to complete the sheathing all round the work. The total expenditure incurred was $4,992.96.

As now completed the pier is 245 feet long and 130 feet wide. It is 29 feet high above the bottom of the river at its outer end, which stands in about 8 feet of water at low water spring tides.

Repairs.—In 1883 and 1884 minor repairs were effected to the flooring, &c., at an aggregate cost of $288.55.

In 1887 a slip was built at the outer end of the pier, the waiting room was painted and general repairs performed at a cost of $1,390.34.

In 1889 the flooring of the pier was almost entirely renewed and six fenders 14 inches square, were placed along its outer face, at a cost of $1,631.65.

In 1892 and 1893 the flooring of the pier was completely renewed on a length of 210 feet and a width of 110 feet, with red spruce planks 5 inches in thickness ; the east side of the structure was raised 18 inches, the waiting room was painted both inside and outside, and two mooring posts were renewed, the expenditure incurred during the two years was $3,024.04.

In 1894, a sum of $1,999.60 was expended for the construction of a movable slip and the purchase of two crab winches to raise it. During the years 1895 and 1896, a portion of the outer face and the whole of the eastern face of the structure were resheathed with red spruce 6 inches in thickness, and a portion of the flooring not completed in 1893 was laid.

Expenditure during the two years, $3,991.88.

During the year 1898, a sum of $239.79 was expended on minor repairs to the flooring, sheds and waiting-room.

During the year 1899, a freight shed 60 by 30 feet was constructed on the south side of the pier for the storage of butter and cheese. Part of the top planking was renewed. The work was done by day labour at a cost of $1,499.27.

During the year 1900, the pier was raised 3 to 5 feet over the whole surface; stone ballast was placed in the outer end which was also sheathed with tamarack and covering renewed with 3-inch plank at a cost of $5,050.59.

During the year 1900-01, a new 3-inch tamarack floor was laid on a length of 210 feet, and a width of 45 feet.

The northern part of the wharf for a length of 145 feet was sheathed and the sheds were painted.

Expenditure, $1,012.12.

During the year 1901-02, the old buildings on the wharf were taken down and new ones erected, the new freight shed measures 60 by 30 feet, and the passengers' waiting-room is 25 by 25 feet. These two buildings are covered with galvanized iron and painted three coats inside and outside. On the north side of the wharf six fenders 11 by 11 inches were placed, and five snubbing posts were renewed.

Expenditure, $1,513.34.

During the year 1903-04, the sheathing on the two outer corners of the wharf was renewed with hardwood, new fenders put in at the head of the wharf, the flooring was repaired and a portion of the flooring on shore which had to be renewed was replaced with gravel, and other minor repairs were performed.

Amount expended, $1,045.03.

Total amount expended to July 1, 1904, $53,051.82.

Spring tides rise 17 feet, neaps 9 feet.

CLARK CITY (SEVEN ISLANDS).

Clark City is the name of a new settlement established on the western shore of the bay of Seven Islands, in the county of Chicoutimi and Saguenay, on the north shore of the River St. Lawrence, about 330 miles below Quebec.

In 1902, the North Shore Power, Railway and Navigation Company, acquired large tracks of timber land and commenced the construction of extensive pulp and saw-mills on the Ste. Marguerite river which falls into the River St. Lawrence a short distance to the west of the bay of Seven Islands.

The site of the mills is about nine miles inland from the St. Lawrence, and to facilitate the shipping of their products, the company built a railway from their mills to a point, on the western side of Seven Islands Bay, near its entrance into the St. Lawrence, and called Pointe Noire, where the construction of a commodious wharf was also commenced.

The bay forms a large, deep and well sheltered natural harbour which only requires wharf accommodation. In 1904, the department decided to construct the wharf as a public work and to refund to the company for work performed thereon and for materials already delivered for its construction, and the company transferred to the department the site and right of way to the approaches of the structure.

The part constructed by the company consisted in the approach of stone and earth, 546 feet long, 30 feet wide on top, with side sloping 1 in 1, and of an average height of 20 feet; a crib built of close-faced timber, 200 feet long, 30 feet wide and 20 feet high, sunk in place and ballasted ; framed timber for another crib of the same dimensions, but not built, for the whole of which the sum of $34,433.95 is to be paid.

The materials delivered consisted in pine, spruce and cedar timbers, also a quantity of iron, for which the sum of $21,485.34 is to be paid. The construction of the wharf is being continued by the company under the supervision of an engineer from the department and payments are made by the department on the production of certified vouchers. When completed the wharf will be 1,100 feet long, comprising an approach of earth and stone 546 feet long as described above, timber cribwork 30 feet wide on a length of 401 feet and a further length of 153 feet of cribwork 40 feet wide; the outer end will stand in a depth of 26 feet at low water spring tides which rise 15 feet.

The expenditure for the fiscal year 1903-04 was $25,009.06.

CLORYDORMES.

The sum of $187.15 was expended towards the removal of loose and solid rock at Petite Anse and $190.81 were spent at Little Clorydormes bay, county of Gaspé, to remove large boulders that were in the way of fishing boats. Total, $267.21.

COTEAU DU LAC.

The village of Coteau du Lac, in the county of Soulanges, is situated on the north shore of the St. Lawrence, thirty-six miles above Montreal.

Construction.—In 1888, the construction of a landing pier was commenced and was completed in 1889 at a cost of $6,918.71. It consists of a head block of solid cribwork, 101 feet long and 21 feet wide, with a cribwork extension, 40 feet long and 47 feet wide, built along the middle of its inner face, and a block and span approach 75 feet long and 26 wide. The outer face of the head block is 15 feet high above the bottom of the river and stands in 10 feet of water at ordinary low water. Across the inner end of the extension to the head block, is built a freight shed of the full width of the extension and 20 feet long, with a passageway for vehicles underneath.

Repairs.—During the year 1894-5, sundry repairs were effected to the structure at a cost of $249.99. In 1896-97, most of the floor stringers and the whole flooring of the

pier, which were decayed, were removed, new floor stringers were put in, the whole structure was refloored with 4-inch hemlock planks at a cost of $694.58.

In 1897-8, sundry repairs were made to the corner sheathing, capping, &c., at a cost of $200.41.

In 1903-04, the head block being decayed and dilapidated was removed to low water level and rebuilt with close-faced 12 by 12 inch timber.

The work carried out by day labour, was commenced in March, 1904, and was not completed June 30. The expenditure during the fiscal year was: $914.36.

CRANE ISLAND (SOUTH SHORE).

Ile aux Grues, or Crane island, is in the River St. Lawrence, opposite Cape St. Ignace, in the county of Montmagny ; it is about 40 miles below Quebec. Spring tides rise 20 feet ; neap tides, 12 feet.

The inhabitants are chiefly engaged in farming.

During the past fiscal year, the renewal of the superstructure of the wharf, begun in 1902, was continued ; for a length of 270 feet, on a height of 6½ feet, all the face timbers, cross-ties and longitudinals together with the top planking have been renewed, and 160 cubic yards of stone ballast were added.

These repairs were done by day labour during the months of August, September and October, 1903, at a cost of $3,496.07.

DESCHAMBAULT.

Deschambault, county of Portneuf, is a flourishing village on the north shore of the St. Lawrence and the Canadian Pacific Railway, forty-one miles above Quebec. A steamer plies semi-weekly to and from Quebec.

Owing to the decision of the department to build the proposed wharf by contract work, the expenditure was made to pay only for materials purchased prior to such decision, their delivery at Deschambault and services connected therewith.

There was also an expenditure of $195, incurred to repair the trestle roadway and put it in place at the opening of navigation between the isolated block and the shore.

Total expenditure for the fiscal year, $2,972.

ECHOURIE.

The sum of $98.65 was expended towards the removal of rocks at Echourie, county of Gaspé.

FATHER POINT.

Father Point, in the county of Rimouski, is on the south shore of the St. Lawrence, six miles below the town of Rimouski. Most of the ocean liners call there to land or take their pilots. The point is one of the few places on the south shore of the St. Lawrence, where deep water can be found at a relatively short distance from land.

A self-registering tidal gauge was established here some years ago by the Department of Marine and Fisheries. There are also a powerful compressed air fog-horn and an acetylene gas lighthouse.

It was found desirable a few years ago, that a deep water wharf be constructed at Father Point ; tenders were called for and on November 8, 1901, a contract was awarded to Messrs. Heney & Smith for a section of the structure 600 feet long.

The work was carried out during the years 1902-03, and completed by the beginning of July, 1904, the amount of the contract being $57,821. The section is a very substantially built cribwork, thoroughly filled with stone ; it is 600 feet long and 40 feet wide at the bottom; the sides are vertical up to the level of 5 feet below low water line, from this point, the east side is built with a batter of 1 in 4 and the west side is

vertical, the width at top being 32 feet. Both faces are sheathed with hardwood 10 inches thick. The outer end stands in 18 feet of water at low water spring tides.

On May 17, 1904, a new contract was entered into with the same parties for the construction of an additional length of 200 feet. At the close of the fiscal year, one of the cribs was ready to be set in place. The kind of construction is the same as before.

The expenditure for the year 1903-04 was $39,162.26.

GEORGEVILLE.

Georgeville, a village in Stanstead county, on the east side of Lake Memphremagog, 9 miles from Smith's Mills, to the southward of the town of Magog, on the Canadian Pacific Railway, and 13 miles from Stanstead, on the Boston and Maine Railway. It is noted for its lake sceneries, and as the site of many beautiful summer residences. It contains two churches, Episcopal and Methodist, telegraph office, two hotels, two stores. It is a port of entry of importance and all steamers plying between Magog and Newport (State of Vermont, U.S.A.) call at the wharf.

During the month of October, 1903, the sum of $78.57 was expended to effectuate repairs to the flooring and minor repairs to the wharf at that place.

GRANDE ENTRÉE.

Grande Entrée is situated on the western end of Coffin island. The sum of $26 was expended towards the erection of a crane on the north-west corner of government pier.

GRANDE RIVIÈRE.

Grande Rivière, county of Gaspé, is on the Baie des Chaleurs, 21 miles south-west of Percé.

The sum of $965.79 was expended during the last fiscal year for repairs to this wharf. Four hundred feet in length of the pier has been floored over with spruce deals; the head of the pier was raised 18 inches on a length of 75 feet, some minor repairs done to the shed and six hardwood fenders were placed on the outer end.

GRANDES BERGERONNES RIVER.

Grandes Bergeronnes, in Saguenay county, is on the north shore of the St. Lawrence, eighteen miles below Tadousac.

The entrance of the River Grandes Bergeronnes being obstructed by boulders, and a channel of about 150 feet was cleared from the entrance to the village for a distance of one mile.

In the years 1887, 1895, 1899, 1901 and 1902 a total sum of $1,254.32 was expended.

During the fiscal year 1902-03, the work was continued in the channel. The work was done by blasting, by day labour. The amount expended was $398.77.

During the fiscal year 1903-04, the work was continued in completing the removal of boulders in the river.

Spring tides rise 16 feet, neap 9 feet 1½ in.

Amount expended, $224.38.

Total amount of expenditure to July 1, 1904, $2,177.12.

GREEN RIVER.

Green river, which flows through the parish of Isle Verte, empties into the St. Lawrence, about three-quarters of a mile west of Isle Verte church. During spring freshets, this river is liable to cause considerable damage by flooding the mills, scouring and disintegrating the land of the riparian properties.

In order to prevent further damage, or at least, to reduce it to the lowest possible amount, it was decided to improve the channel of the river, to facilitate the waterflow in the spring. To that effect, the following works were performed :—

A new channel, 800 feet long, 20 feet wide, was opened on the west side of the river; about 1,200 cubic yards of earth and 200 cubic yards of blasted rock being removed.

A dike, 200 feet in length, 8 feet high, on widths of 16 and 8 feet at base and top respectively, was built of open-faced cribwork, filled with stone, with a water tight sheathing in front. These works were done by day labour, during the months of November, 1903, and May and June, 1904; the amount expended was $3,698.76.

GRIFFIN COVE.

Griffin Cove, county of Gaspé, is seventeen miles north-west of Gaspé cape. The mouth of the river having been closed up by a gravel bar thrown in by north easterly gales, overflowed the flats and part of the village, causing a good deal of damage to property and to the fishing industry. A channel was cut through the bar and a training pier, 170 feet long, 22 feet wide and average height of 11 feet, was built to guide the current in the channel and keep it opened.

The sum of $1,999.06 was expended on this work during the last fiscal year.

GRINDSTONE.

Grindstone is a village on the south side of Grindstone island four miles east of Etang du Nord and composed mostly of Scotch farmers and Acadian fishermen.

For years past most of the freight for the Magdalen islands has been unloaded here and the building of a landing pier was greatly needed. In the fiscal year 1901-02 an approach of 605 feet, 25 to 50 feet wide, and of an average height of 9½ feet on the outside face was built along the eastern side of Grindstone cape.

The other face of the approach, exposed to the heavy easterly gales from the Atlantic ocean, is protected by a sheathing of split spruce logs, held in place by two sets of walings fastened by cross-ties and a double set of posts. A mattrass of brush was laid under the stone filling.

During the past working season the pier was extended 200 feet with an average width of 28 feet and an average height of 22 feet; six feet of the superstructure of the last 100-foot crib remains to be done. The depth of water at head of work is now 14 feet at low water spring tides.

The amount paid out during the past fiscal year on this work was $9,408.76.

Spring tides rise 4 feet; neaps, 2 feet.

GRONDINES.

Grondines, county of Portneuf, is situated on the north shore of the St. Lawrence, 48 miles above Quebec.

Owing to the decision of the department to build the proposed new wharf by contract work instead of by day labour, the expenditure incurred was for materials purchased prior to this decision, their delivery at Grondines and services in connection therewith, also for tools and plant.

Expenditure during the fiscal year, $4,395.60.

GROSSE ROCHE.

Grosse Roche, called Sacré-Cœur, in the county of Saguenay, is situated on the north side of the River Saguenay.

Sacré-Cœur is an important settlement of the Saguenay; it contains one church, post office, telegraph office, several stores and two cheese factories.

During the session of 1903, the sum of $1,000 was voted towards the construction of a wharf.

Timber was purchased to the amount of $951.39.

HOUSE HARBOUR.

House Harbour is an important parish on the western end of All-right island.

The pier built at the channel during the fiscal year 1900-01 forms an oblong of 50 feet by 100 feet with 10 feet of water at the head. A sum of $112.28 was spent to buy material for repairs to the flooring and to raise the head of the pier that had settled some 18 inches.

HULL.

Hull, the shire-town of the county of Wright, is situated on the Ottawa river, opposite the city of Ottawa. It possesses unrivalled water power privileges and contains a number of saw-mills, a pulp and paper manufacture, a match factory, &c., &c.

Two large iron bridges span the river at this point, connecting it with the city of Ottawa. Population, 14,000.

The work of building a concrete and masonry wharf on the Ottawa river at the foot of Ste. Elizabeth street, was awarded by contract on October 30, 1900.

The wharf consists : 1st, of a landing block 130 feet wide and 70 feet deep, built up to three different levels in ten feet of water, and constructed of a cribwork substructure up to the water level, and a superstructure of concrete masonry walls with filling between them ; 2nd, an approach from shore to the landing block 403 feet long built up also to three different levels, consisting of dry rubble masonry walls with filling between them. During the fiscal year 1900-01 the cribwork substructure of the landing block and a portion of the dry walls were built and some filling made, at a total cost of $9,865.12.

During the fiscal year 1901-02, the work under contract was completed, and other works not provided for by contract were performed. These included : the cementing of the joints of the coping stones of the dry masonry walls for 1,200 lin. feet at a cost of $788.45 ; the erection of a gas pipe railing on both sides of the approach for a length of 718 feet at a cost of $718 ; and the construction of a roadway on Ste. Elizabeth street, 600 feet long, 30 feet wide and protected on both sides by riprap walls having a batter of 1 in 1, at a cost of $5,615.62.

During the fiscal year 1902-03, some minor works were performed to complete the work thoroughly, and a substantial freight shed 50 x 40 feet dimensions, and two stories high was built at a cost of $5,207.05.

During the fiscal year 1903-04, repairs and maintenance amounted to $68.79.

Total expenditure on this work up to June 30, 1904, is $54,118.55.

IBERVILLE.

Iberville, an incorporated town in the county of the same name, on the Richelieu river and on the Central Vermont Railway, Canadian Pacific Railway and United Counties Railway, opposite the town of St. John's. It contains two churches, Roman Catholic and Episcopal, a number of stores, 1 iron foundry, several hotels, 3 potteries, 1 grist mill and 2 agricultural implement factories. Population, 1,512.

During the fiscal year 1903-04, the following repairs were made to the wharf at that place, built in 1899. Half the floor of the head block was renewed, that of the approach was redoubled and the storehouse and guard railing were painted two coats.

The expenditure was $412.84.

ILE AUX COUDRES.

This island, with a population of 1,500, is in the county of Charlevoix, sixty-two miles below Quebec.

During the fiscal year 1903-04 the extension built in 1902-03 was sheathed with hardwood planks.

The amount expended during the fiscal year 1903-04 was $2,042.94.

ILE PERROT.

Ile Perrot is an island in Vaudreuil county, at the confluence of the Rivers Ottawa and St. Lawrence, and between the Lake of Two Mountains and Lake St. Louis. This island is about seven miles long and divides the Ottawa into two branches.

During June, 1904, minor repairs were effected to the flooring and guard railing to the wharf on the south shore of the island at a cost of $437.80.

ISLAND HOUSE, OR GRAND DISCHARGE.

Island House, Chicoutimi county, is situated at the head of the Grand Discharge of Lake St. John, seventeen miles from Roberval, it is a sporting resort with good hotel accommodation, a steamer, the 'Mistassini,' makes a daily trip from Roberval to Island House.

In 1894-95 the floating pontoon, built by the hotel proprietor, for landing passengers, was transferred to the Department of Public Works and a sum of $500 was expended in building an extension thereto 40 by 25 feet. The pontoon is now 100 x 25 feet, built of four rows of round logs of cedar set close lengthwise and crosswise, with floor stringers every 4 feet and covered with 2-inch planking.

The outer face is provided with nine guard fenders reaching a height of 6 feet above the flooring.

During the fiscal year 1903-04, the floor stringers were renewed and a new flooring was put on ; the fenders and the mooring posts were also renewed.

Amount expended, $182.17.

Total amount of expenditure, $686.17.

ISLE VERTE.

The village of Isle Verte, in the county of Temiscouata, is situated on the south shore of the St. Lawrence, sixteen miles below River du Loup and 131 miles east of Quebec. It contains flour, carding and saw-mills.

Spring tides rise 19 feet; neap tides, 12 feet.

During the past fiscal year 1903-04, the sum of $800 was expended to improve the harbour; 360 cubic yards of large boulders were removed from the mouth of the River Verte, in the vicinity of the head of the wharf.

Urgent repairs required to the planking of the wharf, have also been done.

KAMOURASKA.

The village of Kamouraska, in the county of same name, is situated on the south side of the St. Lawrence, ninety miles below Quebec; it is a well known place, most frequented as a summer resort. Spring tides rise 19:5 feet; neap, 12 feet.

During the fiscal year 1903-04, in order to provide shelter for schooners and other vessels and upon the special request of the navigators and business men of the place, it was decided to repair the old block standing on the west side of the new wharf and to connect it with the shore, by a light cribwork, 175 feet in length on a width of 20 feet.

The work was begun on May 20, 1904, and at the close of the fiscal year the old crib was repaired and about one half of the shore section was constructed.

The work was done by day labour and the sum expended was $3,915.81.

KNOWLTON LANDING.

Knowlton Landing is a post office in Brome county, on Lake Memphremagog, near Knowlton on the Canadian Pacific Railway.

During the months of March, April and June, 1904, some repairs were made to the public wharf at that place. They consisted in renewing several caps, pieces and stringers, repairs to the flooring and replacing two mooring posts with cast iron nigger heads.

The expenditure during the fiscal year was $176.52.

LAC A BEAULIEU.

Lac à Beaulieu, in the municipality of Les Bergeronnes, is situated three miles north of Les Bergeronnes village.

The outlet of Lac à Beaulieu is obstructed with boulders and rock, which render the floating of logs very difficult.

The sum of $297.76 was expended in removing boulders and blasting points of rock.

LAKE MEGANTIC.

Lake Megantic, is a post village in Compton county, on Lake Megantic, and on the Canadian Pacific Railway, 60 miles from Sherbrooke. It contains two churches, one Presbyterian and one Roman Catholic, one large saw-mill, one furniture factory, several stores, three hotels, telegraph office. Population, 1,883.

During the month of November, 1903, the sum of $51.13 was expended to effectuate minor repairs to the wharf at that place.

LAPRAIRIE.

Laprairie, the chief town of the county of the same name, is situated on the south shore of the River St. Lawrence, seven miles above Montreal.

During the months of July and August, the sum of $878.74 was expended by day labour to effectuate repairs to the protection walls at that place. Two sections of that protection wall, of a total length of 823 feet, being too much decayed and dilapidated to be repaired, it was decided to replace them by a concrete wall, 7 feet 8 inches wide at the base, and a width of 3 feet at the top, by an average height of 18 feet. To that effect, a contract was entered into with Messrs. Amiot & Lemay, of Montreal, for the sum of $29,650. The work was commenced in November, 1903, suspended during the winter and continued in May, 1904. At the end of the fiscal year, the work was over half done.

Against the appropriation of $15,000, the sum of $14,951.04 was expended, including the amount of $878.74 for repairs, as above stated.

LES CUISSES D'ALMA.

Les Cuisses d'Alma, Chicoutimi county, in the little discharge of Lake St. John, three miles from the lake, is in the parish of St. Joseph d'Alma, and seven miles from the village of that name.

At this place there are three rocks called the Cuisses d'Alma, and an island which obstructs the channel of the Petite Décharge.

In 1901-02, the blasting of these rocks was commenced on the east side. Amount expended, $575.92.

In the year 1902-03, the east side was completed and a portion of west side was done.

Amount expended, $1,229.37.

During the fiscal year 1903-04, the removal of the two points of rock was completed, and work was commenced on the island a short distance below.

Amount expended, $1,501.97.

Total of expenditure to July 1, 1904, $3,282.88.

LES ESCOUMAINS.

Les Escoumains, in the county of Saguenay, is situated on the north shore of the River St. Lawrence, twenty-one miles below Tadousac.

The Saguenay Lumber Company have an extensive saw and pulp mill at this place. There is one Roman Catholic church, telegraph and post office and several stores.

The harbour of Les Escoumains was obstructed by boulders. During the year 1902-03 the sum of $592.29 was expended in blasting part of the obstructions.

During the fiscal year 1903-04, the blasting of boulders at the entrance of and in the harbour of Les Escoumains was continued.

Amount expended, $198.25.

Total amount of expenditure, $499.38.

Spring tides rise 15 feet ; neaps, 9 feet.

LE TABLEAU (DESCENTE DES FEMMES).

Le Tableau—Descente des Femmes—is a new settlement on the north side of the River Saguenay, about sixty-one miles from its mouth. In view of giving facilities to the colonization of that portion of the Saguenay who have no other communication than by water, it was decided to build a wharf at this place.

During the year 1902-03 a block of cribwork 40 feet in length by 30 feet in width and a return of 30 feet by 25 feet, and also two piers 25 by 25 feet and 25 feet apart were commenced.

The block was sunk in 18 feet of water. The block and the return forming an L, are built of close-faced timber 11 by 11 inches and sheated on the outer corners with hardwood timber.

A landing slip was built in the outer block and one in the return on the west side. The piers are built of round logs open faced.

Amount expended was $5,035.71.

During the fiscal year of 1903-04 the work was continued and an approach was built. The corbels and part of the stringers have been laid.

The outer end of the structure is 38 feet high, the work was done by day labour.

The amount expended during the fiscal year 1903-04 was $3,018.33.

Total amount of expenditure to July 1, 1904, $8,005.71.

Spring tides rise 18 feet ; neaps, 11 feet.

L'ISLET.

The Village of L'Islet, in the county of the same name, is situated on the south shore of the St. Lawrence, fifty miles east of Quebec. Spring tides rise 21 feet ; neap, 13 feet.

The wharf at this place has a length of 1,105 feet and a width of 31 feet, with a head block 116 feet wide. This wharf was substantially built with close-faced cribwork, it will nevertheless require heavy repairs in the near future; the superstructure is now in an advanced state of decay.

During the fiscal year ended June 30, 1904, the slip on the west side of the wharf, which had been partly repaired the previous year, was thoroughly restored; 450 spruce deals were used to make general repairs to the sidewalks and top planking. Some of the upper-face timbers were temporarily repaired.

The work was done by day labour at a cost of $496.17.

LOTBINIÉRE.

Lotbinière, in the county of the same name, is situated on the south shore of the St. Lawrence, about forty miles above Quebec.

At the beginning of 1904, a contract was awarded for the construction of an extension from the shore to the isolated block, a distance of 420 feet and 20 feet wide on top.

At the end of the fiscal year the work had been commenced but not completed. The amount expended was $6,971.97.

MAGOG.

Magog, a thriving incorporated town, is on the Magog river, at the outlet of Lake Memphremagog, in Stanstead county, and a station on the Canadian Pacific Railway, 3 hours run from Montreal. It is a sub-port of entry and contains 4 churches English, Methodist, Roman Catholic and Union, 30 stores, 4 hotels, saw and grist-mills, Dominion Cotton Company's mills with 800 operatives, 3 bakeries, 1 carriage factory, 1 newspaper, 2 telegraph and 2 express offices and good schools. Population, 3,516.

In order to accommodate the local trade a landing pier was purchased in August, 1875, for the sum of $2,500.

It is situated opposite the railway station, and is a pile structure 430 feet long, 24 feet wide for the first 305 feet from the shore, and 40 feet wide for the remaining 125 feet. Its head is 12½ feet high above the bottom of the lake and stands in 7½ feet at low water.

Repairs.—In 1896-7, the most urgent repairs to the flooring were effected at a cost of $154.82. During the year 1899, a number of broken planks in the flooring were removed, a new storehouse and guard railing were built at a total cost of $530.07.

In 1901-02, minor repairs were made at a cost of $11.34.

This landing pier having become dangerous owing to decay, and as the roadway leading to it was in a bad state, incommodious and is the property of the Canadian Pacific Railway, it was decided to build a new landing pier at the foot of Lake street; to that effect, permission was obtained by a resolution of the town council, on March 11, 1904, and the work was commenced. It consists of a stone embankment 200 feet in length by 26 feet in width on top, from the foot of Lake street, and a head 16 feet in length by 40 feet in width, was built with piles, caps, stringers and flooring.

The work was not completed on June 30, 1904, it is being done by day labour.

The expendiutre during the fiscal year 1903-04 was $1,806.58.

MAGOUASHA.

Maguasha landing pier, is on the north shore of the Baie des Chaleurs, Bonaventure county, opposite the town of Dalhousie, N.B.

A contract was let for $7,500, for the construction of a wharf at this place. It is to be 330 feet long and 20 feet wide. The amount expended during the year 1903-04 was $3,998.70. The work was not completed at the end of the fiscal year.

MARIA.

Maria wharf, on the north shore of the Baie des Chaleurs, Bonaventure county.

In May, 1902, a contract was awarded for the construction of a wharf at this place.

In the year 1902-03 the sum of $11,991.13 was expended on the wharf.

During the fiscal year 1903-04 the work was completed and the amount of $20,640.65 was expended.

MATANE.

The village of Matane, in the county of Temiscouata, is situated on the south shore of the St. Lawrence, at the mouth of the River Matane, 240 miles below Quebec, and 30 miles from Little Metis, the nearest point on the Intercolonial Railway. It contains extensive saw-mills and a spoolwood factory. Spring tides rise 15 feet; neaps, 8 feet.

The breakwater standing on the west side of the mouth of the river, being badly damaged by ice during the month of November, 1903, some urgent repairs were done to it. Owing to high water, it was only at the beginning of the month of June, that the work could be resumed.

At the close of the fiscal year, all the materials, timber and iron, required to complete the repairs, were bought and paid for, and the work was progressing; it consists in repairing the cribs and renewing the whole of the sheet piles covering the seaward face of the breakwater.

The repairs are performed by day labour and the amount expended was $2,973.34.

MISTOOK.

Mistook, in the township of Taillon, situated on the Grand Discharge of Lake St. John, in the county of Chicoutimi, is also called Saint Cœur de Marie, and contains one Roman Catholic church, post office, several stores, two cheese factories, and two saw-mills.

During the fiscal year 1903-04, a pier 40 feet in length at bottom and 30 feet at top by 20 feet wide, and 23 feet in height, was sunk at 150 feet from high water mark; the pier is built with a landing slip in front (ice breaker) sheathed with 8-inch hardwood planks and also a slip on the outer face. The pier is built of open-faced round-logs and fendered every 8 feet with 8 by 10-inch timber; the work was done by day labour.

Amount expended was $2,061.04.

MONT-LOUIS.

Mont-Louis, a village of considerable importance, in the county of Gaspé, and the first municipality below Ste. Anne des Monts, is one hundred and thirty-five miles below the nearest Intercolonial Railway station, Metis. The harbour of Mont-Louis, the largest and best situated on the St. Lawrence Gaspé coast, offers good water and good protection against all winds, except from northerly winds.

The landing pier being built from the west shore towards the eastern point of the bay, will, when completed, shelter it against northerly winds.

A crib 110 by 25 feet, and 10 feet high, was built and placed in position in July. The total expenditure during the last fiscal year was $4,999.69.

Spring tides rise 9⅛ feet, neaps, 5 feet.

MONTMAGNY.

Montmagny, in the county of the same name, is on the south shore of the St. Lawrence thirty-seven miles below Quebec. It is a thriving little town of over 2,000 inhabitants, important shippings of lumber are made by the Price Bros. Co., to European markets.

Besides a pulp mill, there are also two foundries and iron works.

The town is built on both sides of Rivière du Sud which has a perpendicular fall of 20 feet and empties into the St. Lawrence ; below the fall, the river expands and forms what is called the 'basin,' affording shelter from the winds, for vessels of moderate draught.

During the last fiscal year, the shed built on the shore end of the wharf, was repaired and painted, at a cost of $123.93.

Spring tides rise 21 feet; neap tides, 12 feet.

MONTREAL HARBOUR (LOWER DIVISION).

During the season of 1903, the remaining six sections of cribwork were launched, built and sunk, completing the substructure of the main pier and eastern bulkhead.

The laying of footing blocks was continued from July to November, 1903, covering sections 7 to 14 inclusive or a distance of 1,250 feet.

The work of the concrete walls was resumed on September 16, and carried on till November 19, the space built being sections 6 to 12 inclusive, or a distance of eleven hundred feet (the height of wall 18 feet above datum line, quantity of concrete laid 5,986 cubic yards).

The excavation was performed by the dredge 'King Edward VII' and the materials deposited as refilling behind the walls and behind the cribs.

After the excavation to prepare the site of cribs was completed, viz., from November 6, 1903, the dredging necessary to procure material for filling behind walls was not included in the original contract, and to June 30, 1904, the quantity returned as an extra has amounted to 149,150 cubic yards.

The quantities returned from June 30, 1903, to November 6, 1903, amounted to 113,000 cubic yards.

The following is a summary of the principal items of work performed during the fiscal year :

Oak sheathing of cribs	25,555	cubic feet.
Spruce and hemlock	220,800	"
Stone ballast	34,920	cubic yards
Iron in bolts, &c	261,200	pounds
Dredging	262,150	cubic yards
Concrete footing blocks	3,614	"
Concrete walls	5,986	"

The amount expended during the fiscal year 1903-04, was $209,104.96.

NEW CARLISLE.

New Carlisle, on the north shore of the Baie des Chaleurs, is the chief town of the county of Bonaventure.

During the year 1903-04, the sum of $1,300.93 was expended in procuring the timber required for the sheathing of the wharf at this place.

NOMININGUE.

Nominingue, a post village in Labelle county, is on Lake Nominingue and the terminus of the Canadian Pacific Railway, Laurentian Mountains Branch. It contains 1 Roman Catholic church, 1 convent, 5 hotels, saw and grist mills, several stores and telegraph office.

During the fiscal year 1903-04, the construction of five small wharfs was commenced. They consist of a head block, 31 by 20 feet, of open faced round logs, fully ballasted and floored with 3-inch plank, and a stone approach. They are situated thus : one on Lake Bourget, one on Lake Petit Nominingue, and three on Lake Grand Nominingue.

The work, carried out by day labour, was not completed on June 30, 1904, but was well under way.

The expenditure during the fiscal year was $2,017.22.

NOTRE DAME.

The village of Notre Dame is situated on the west side of Lake Temiscouata, on the Temiscouata Railway, about midway between River du Loup and Edmunston, in the county of Temiscouata. It is the centre of an extensive lumber trade ; two steamboats and numerous other vessels are plying over the lake during the season of navigation, which does not usually close before the beginning of January.

Lake Temiscouata, is 30 miles long, on a width varying from 1 to 2 miles, while its tributaries, rivers and lakes, are far famed among hunting and fishing sportsmen.

In order to provide landing accommodation on both sides of the lake, two small piers of open faced cribwork were commenced at Notre Dame during the month of November, 1900 ; one on the west side, opposite the church, and the other on the east side. The expenditure during that year was of $1,068.37.

In 1901 these piers were raised 5 feet at the outer ends and brought level to the shore ground; they were filled with stone ballast and planked over with spruce deals. Stairways were provided for landing at low water stage. The two piers were sheathed on all sides. The amount expended in that year was $1,185.72.

During the fiscal year 1902-03, the sum of $1,124.72, was expended in building a close faced extension 30 x 25 feet and 17 feet high to the pier on the west side of the lake.

In the course of the fiscal year 1903-04, the pier standing on the east side was also extended ; an addition 30 x 25 feet and 18 feet high, of close faced cribwork was built at a cost of $1,139.50.

The whole works were performed by day labour and the total expenditure, since the beginning, has been $4,578.31.

PASPEBIAC.

Paspebiac is in the county of Bonaventure, on the Baie des Chaleurs, 68 miles from Percé.

During the year 1903-04, a contract was let to build a wharf at this place for the sum of $19,695. It is 450 feet long by 30 feet wide.

During the year 1903-04 the work done on the contract amounted to $5,705.82, but the work was not completed.

PERCÉ.

Percé, the shire town of the county of Gaspé, is situated on the Gulf of St. Lawrence, thirty-six miles from Gaspé basin. The harbour consists of two small coves called the north and south coves.

In 1900, a contract was awarded for the construction of a wharf in the north cove, it is 670 feet long, 20 feet wide for a length of 260 feet, thence tapering to a width of 29 feet at the outer end which stands in 13 feet at low water spring tides. At the end of 1902-03, the structure was completed.

During the fiscal year 1903-04, rock and boulders were removed from the harbour at Red Head and White Head at a total cost of $636.93.

Seventy feet on the east side of the south beach or old wharf at Percé was repaired by sheet piling.

A shed and waiting room on the shore end of new wharf, north beach, 30 by 40 feet was partly built ; 66 per cent of the work was done.

A slip 10 by 10 feet was built at the outer end of north pier and a roadway built from the main road, at a cost of $1,387.26.

The total expenditure for the year 1903-04 was $1,786.89.

PETIT BONAVENTURE.

Petit Bonaventure, county of Bonaventure, is situated on the Baie des Chaleurs.

During the fiscal year 1903-04, the sum of $200 was expended in lowering the approach to the wharf.

PETITE RIVIÈRE AU RENARD.

The sum of $50 was expended towards the removal of rocks at Petite Rivière au Renard, county of Gaspé.

PETITE RIVIÈRE EST.

Petite Rivière Est, is in the county of Gaspé. During the last fiscal year, the sum of $175 was expended towards the removal of rocks from the harbour.

PETITES BERGERONNES.

Petites Bergeronnes, county of Saguenay, is situated on the north shore of the St. Lawrence, fifteen miles below Tadousac. There is an important saw-mill in the River Petites Bergeronnes.

The entrance to, and the river itself, being obstructed by boulders, a channel was cleared up to the saw-mill.

Spring tides rise 16 feet, neap 9 feet.

Amount of expenditure during the fiscal year 1903-04, $611.36.

PETITES TOURELLES.

One hundred dollars were spent towards the removal of rocks and the opening of a channel, 30 feet wide, through a shoal of large boulders at the entrance of a small bay used by fishing boats, at Petites Tourelles, county of Gaspé.

PETITE VALLÈE.

Fifty dollars were expended towards the removal of rocks at the mouth of the Little Vallée river, county of Gaspé.

PIERREVILLE.

Pierreville, a thriving post village in Yamaska county, on the River St. Francis, near its entrance into the St. Lawrence, 28½ miles north-east of Sorel, the actual terminus of the South Shore Railway.

It contains 1 Roman Catholic church, 1 telegraph office, about a dozen stores, saw, grist and carding mills, and has a very extensive lumber trade. Buckskin gloves, mitts and shoes and baskets are made here in large quantities by a tribe of Abenaquis Indians. Ship building is also engaged in. Population of the village: 1,108.

By the fact that the private wharf at Pierrevillle is situated above the bridge of the South Shore railway, and that since the construction of that bridge, the barges and vessels cannot pass under the bridge, it was decided to build a public wharf immediately below the bridge; to that effect a right of way, from the public road to the river was purchased, part from Mr. Jos. Rasconi, of Pierreville, and part from the Abenaquis Indian reserve, for the sum of $700.

On June 30, 1904, the work was not commenced, but materials had been procured for the sum of $3,816.91.

The work will be carried out by day labour during next fiscal year.

POINTE À ELIE.

Pointe à Elie is the extreme south-easterly point of Allright island, two miles east of House Harbour Catholic church.

The steamer 'Amelia' calls at Pointe à Elie for mails and freight and for shelter during north-easterly gales.

The construction of a landing pier and breakwater will give here the best of shelter from all storms and specially from easterly gales that prevail in the spring.

During the fiscal year 1903-04 a length of 195 by 24 feet wide of the pier proper was built.

The amount paid out on this work during the last fiscal year is $10,431.45.

POINTE AUX ESQUIMAUX.

Pointe aux Esquimaux, in the united counties of Chicoutimi and Saguenay, is situated on the northern shore of the River St. Lawrence, 525 miles below Quebec.

Pointe aux Esquimaux is the chef lieu of the north shore and contains one Roman Catholic church, one convent, a hospital, 3 stores; it is the most important trading post of the north shore for the traffic of fur, fish and oil.

The wharf purchased by the government in 1895 had a length of 125 feet and a width of 30 feet. In 1895-96, it was lengthened 60 feet by the construction of a block 30 by 30 feet and 32 feet in height, connected with the old work by a platform 30 feet in length, the wharf is now 185 feet in length, 30 feet in width and has a depth of water, at its outer end, of 24 feet at low water.

Amount expended $4,028.43.

During the fiscal year 1902-03 a block of 30 by 30 feet and 50 feet high was built in 41 feet of water, 15 feet from the outer end of the wharf and connected thereto by stringers 10 by 12 inches and 3-inch tamarack deals.

Amount expended $1,633.78.

During the fiscal year 1903-04 a crib 30 by 30 feet was built and sunk alongside of the work built in 1903; as the new work is expected to settle to a certain extent, its top was only finished in a temporary manner. Spring tides rise 5 feet, neaps 3 feet.

Amount expended, $5,099.93.

Total amount of expenditure $10,606.02.

POINTE AUX TREMBLES.

Pointe aux Trembles, county of Portneuf, is a village on the north shore of the St. Lawrence, nineteen miles above Quebec, the nearest railway station is Pont Rouge. on the Canadian Pacific Railway, distant three miles.

Population about 1,250. Spring tides rise 17 feet, neaps 10.

During the fiscal year 1903-04, a road was opened from the public road to the wharf; fences and drains were built on each side of the road. The amount expended was $1,343.88.

POINTE FORTUNE.

Pointe Fortune, a post village in Vaudreuil county, is situated on the south shore of the River Ottawa, seven miles from Grenville, and forty-five miles north-west of Montreal.

It contains two churches, two stores, two hotels, &c. It is the terminus of a branch line of the Canadian Pacific Railway to Rigaud.

In order to better accommodate the traffic by water, the Crown purchased in 1902 from Mr. W. Brown, a wharf 224 feet long, parallel with the shore, together with two rights of way, one at each end of the wharf, connecting with the public road. These roads are respectively 130 and 120 feet long by 18 feet and 20 feet wide, and a strip of

land between the roadways, 158 feet long by 50 feet wide, 80 feet from the public road and adjacent to the wharf, was also purchased, to be used as a cattle yard, the whole for the sum of $1,000.

The top of the structure, which was in a bad state of decay has been removed down to 1 foot below low water on a width of 10 feet, and the wharf rebuilt on sound foundations, with close-faced cribwork, well ballasted with stone. The new work is 19 feet high for the upstream 100 feet of its length, thence sloping upward to a height of 13 feet in the next 40 feet, and level for the remaining 84 feet. The wings at both ends are 25 feet long, joining the high ground of the shore. The outer face is built to a batter of 1 in 12, and the upper and lower corners are protected with steel boiler plates ⅝-inch thick. The top of the wharf, for a width of 12 feet from the outer face, is covered with three inch planks.

Completed during the fiscal year 1903-04, the sum of $1,078.93 was expended to complete the wharf, to erect a storehouse and waiting-room and to fence in the cattle yard.

The total expenditure on that work is:—

Purchase price	$1,036 80
Construction	5,078 34
Total	$6,115 14

PORT DANIEL.

The village of Port Daniel is on the north shore of Baie des Chaleurs, in the county of Bonaventure.

During the year 1903-04, a sum of $2,500 was expended on the repairs of the wharf at this place.

The work consisted in putting two hundred feet of pile sheathing and refilling the wharf with stone ballast. A further sum of $400 was expended in lowering a hill on the road leading to the wharf.

The total amount expended during the last fiscal year was $5,441.79.

QUEBEC HARBOUR.

In order to afford more accommodation for large ocean steamers to land immigrants and general freight in the harbour of Quebec, the department decided in 1902, to build an extension, in northerly direction, to the present breakwater, built many years ago on the river front of the harbour.

On May 8, 1903, a contract was awarded to Messrs. Dussault & Lemieux, of Lévis, for the construction of 462 feet of the extension, and on June 11, 1904, another contract was signed by the same contractors for an additional length of 500 feet of the same class of work as called for by the first contract, the prices in each case being $198,700 and $239,942.87.

The work was commenced in May, 1903, and at the end of June of that year, the sum of $18,831.65 had been paid to the contractors.

The work is being built of timber cribwork, filled with stone ballast, up to 3 feet above low water spring tides, the cribs are founded on a level bed of rubble stone 4 feet in thickness resting on the sand bottom previously dredged to 46 feet at low water ; on top of the cribs, the superstructures will be built of concrete on its total height of 21 feet and will stand 6 feet above high water spring tides.

The back of the cribs and concrete superstructure will be filled to coping level with dredged material, forming an embankment which will increase the available top area by about 220,000 superficial feet.

The depth of water at the outer face of the new work will be 42 feet at low water spring tides which rise 18 feet.

During the fiscal year 1902-03, three timber cribs, forming a total length of 462 feet, were completed ready to sink, the foundation for these cribs had been dredged, the bed of rubble stone had been partly deposited and earth filling, amounting to 45,000 cubic yards, had been done, a quantity of building materials had been delivered.

Work on the second contract was not commenced until the beginning of July.

The amount expended on this work during the fiscal year 1903-04, was $68,347.83, making a total of $87,237.98 since the beginning of the work.

CEDARS (REFUGE PIER.)

This refuge pier is an isolated block situated on the River St. Lawrence, about two miles east of Cedars, Que. It has a length of 80 feet by width of 20 feet. The object of the pier is to offer a mooring place for the rafts and steamboats going down the rapids at times of fog and wind.

During the months of October and November, 1903, and February, 1904, the pier, which was much dilapidated, was rebuilt from the low water level to a height of 4 feet, fully ballasted and provided with two strong cast-iron mooring posts firmly adjusted.

The work was carried out by day labour at a cost of $522.21.

RICHMOND.

Richmond, an incorporated town in Richmond county, is situated on the St. Francis river; it is a station of the Grand Trunk railway, and is 76 miles from Montreal.

It contains, besides the county buildings, 4 churches, 26 stores, 3 hotels, 1 grist-mill, 2 printing offices, 1 bank branch, a government post office building, &c. It is connected with Melbourne on the opposite side of the river by a municipal iron bridge.

During the spring freshets, almost every year, the town of Richmond is flooded to a height of 5 or 6 feet, owing to ice-jams formed in the River St. Francis, at a place called 'The Narrows.' In order to prevent the occurrence of the ice jams and the consequent floods, which have caused considerable damages in past years, it was decided to build four ice breakers, three above 'The Narrows' and one above and opposite the pier of the municipal bridge. In December, 1902, a contract was entered into with Mr. Ross, of Richmond, for the construction of the four ice breakers, for the sum of $10,317. The work was commenced in February, 1903, and completed in September the same year.

In order to complete the system of protection, it was decided to build four additional ice piers situated 150 feet above a dam, in the St. Francis river, about 10 acres above the bridge. The object of those ice piers is to retain the ice which runs over the dam during the winter and forms a large accumulation of ice a few hundred feet below the said dam and contributes largely to the spring floods. To that effect, an agreement was entered into with the contractor, September 28, 1903, for the construction of four additional ice piers of close-faced cribwork, 18 by 12 feet, to a height of 2 feet above the level of the water, fully ballasted, for the sum of $4,000. The work was completed in December the same year.

In June, 1904, the slanting faces of the four ice breakers were sheathed with 3-16-inch steel plates, and the up stream corners of the four ice piers above the dam, sheathed with ¼-inch steel plates at a cost of $628.91.

The whole expenditure on that work is $16,250.31.

The work has proved effective, as there have been no floods since the construction of the ice-breakers, and the municipal bridge, which was carried away in 1902 by the ice and rebuilt during the winter of 1903, has suffered no damage.

RIMOUSKI.

The town of Rimouski, in the county of the same name, is situated on the south shore of the St. Lawrence river, 180 miles below Quebec, its population is about 2,000 inhabitants. It is an important station of the Intercolonial Railway ; it is also the place where the royal mails are transferred from steamers to the railway.

The spring tides rise 15 feet ; neaps, 9 feet.

Owing to the worm eaten condition of the east side of the wharf and also to widen the structure, which has a railway track thereon and is only 20 feet wide, it was decided to construct additional cribwork along the east side of the wharf on a length of 830 feet, 20 feet wide at the bottom, 18 feet wide at the top built to the height of the present wharf.

The works were commenced on May 1, 1904. During that part of the fiscal year, ending June 30, the remains of an old crib 250 feet long, and stone ballast that were obstructing the place to be occupied by the new cribs were removed by manual labour to extreme low water. The remaining part under water will have to be removed by a dredge.

Five cribs forming a length of 526 feet by 20 feet wide, 20 feet high, have been sunk.

The face timbers of those cribs are round spruce logs 27 feet long ; their upper and lower faces are notched every 8 feet to a thickness of 10 inches with parallel faces, to receive the flatted ends of the cross-ties.

The cross-ties are round spruce of sufficient length to reach from side to side of the work, laid 8 feet apart, except the lower row where they are 4 feet, centre to centre.

Trifling repairs have been done to the flooring, and the western inclined slip was rebuilt on a length of 150 feet, for an average height of 8 feet.

At the end of the fiscal year, the sum of $27,236.75 had been expended, a large quantity of materials was on hand for the continuation of the work. This work is being done by day labour.

RIVER DU LIÈVRE.

The Long Rapid, River du Lièvre, is seven miles above the Little Rapids lock and dam, and 19 miles above the town of Buckingham. The construction, in 1892, of a lock and dam at Little Rapid, now called Poupore, rendered the River du Lièvre navigable through the Long Rapid and for one mile above, to the High Falls, which is reached daily during the season of navigation, by a steamer from Buckingham. Owing to the existence of large boulders, the narrow channel and swift current, the navigation through the Long Rapid was very dangerous.

During the fall of 1903, the sum of $864.55 was expended in removing 35 boulders of sizes varying from 10 to 90 cubic feet, the largest having to be blasted.

Owing to a sudden rise of water, the work had to be abandoned at the beginning of October.

RIVIÈRE DU LOUP.

Rivière du Loup, or the town of Fraserville, is the chef-lieu of the county of Temiscouata. It is situated on the south shore of the St. Lawrence, 114 miles below Quebec. It is a thriving little town of nearly 4,000 inhabitants, which contains several manufactories, including two pulp mills.

The River du Loup point, where the wharf is located, is distant two miles from the village; it is one of the best-known and most frequented summer resorts of the St. Lawrence. Spring tides rise 19 feet; neaps, 12 feet.

Owing to the action of the ice and waves, and also the considerable wear and tear due to the heavy lumber traffic, annual repairs are required on this wharf. During the fiscal year 1903-04, the following works were performed :—

To meet the requirements of the Richelieu and Ontario Navigation Company and others, a movable slip, 41 feet long, 9 feet 4 inches wide, was built placed on the east side of the outer end; the old one, which was in bad state, has been thoroughly repaired.

A surface of 8,090 square feet, on the west side of the wharf, was sheathed with spruce 4 inches thick, and the sheathing of the outer end was also sheathed; 525 spruce deals, 3 x 9 inches, were used to repair the top planking.

Owing to the increasing traffic and the needs of tourists, the actual buildings were extended by the construction of an addition 30 x 24 feet, divided into two parts, a general waiting room and a freight shed; the whole was well finished and painted. The ladies waiting room and the agent's office were also painted. These new works and repairs were done during the months of September, October and November, 1903, at a cost of $3,613.20.

RIVIÈRE OUELLE.

The pier is situated at Pointe aux Orignaux, five miles from the village of Rivière Ouelle, in the county of Kamouraska, on the south shore of the St. Lawrence, opposite Murray Bay, on the north shore. A branch of the Intercolonial Railway, built from Rivière Ouelle station, to the outer end of the wharf, bears trains connecting with a steamer which crosses the St. Lawrence several times a day during the summer season, calling at Murray Bay and other places on the north shore.

Spring tides rise 20 feet; neaps, 12 feet.

During the month of May, 1904, the renewal of the sheathing of the outer end, which is 238 feet wide, by 51 feet long, was commenced; the old sheathing being worn out and decayed, was removed over the whole surface of the four sides of the head of the pier. The north-east corner was badly damaged, allowing the stone ballast to fall into the river through an opening existing in the face timbers near low water mark; this opening has been closed and the corner sheathed with 8 inches thick rock elm planks.

Twenty thousand eight hundred and forty-three feet B.M. of black birch, 20,378 feet of elm and oak, and 14,076 feet of tamarack have been used during the months of May and June to renew the sheathing of the outer end. Besides, 16,983 feet B.M. of black birch, 18,000 feet of elm and 12,500 feet of tamarack were brought and paid for out of the appropriation for the fiscal year, together with a certain amount of boiler plates to protect the outer corners.

The quantity of hardwood now in hand, is considered nearly sufficient to complete the repairs to the sheathing of the wharf.

The amount expended during the fiscal year ended June 30, 1904, was $5,845.34.

RIVER RICHELIEU BOOM AT ST. JOHN'S.

In order to give valuable assistance to boats passing through the swing span of the Vermont Central Railway bridge at St. John's, counties of St. John's and Iberville, a boom was constructed.

The boom has a length of 350 feet by a width of four feet, and is moored to clusters of six piles each, driven 15 feet into the ground every 50 feet, except the up stream cluster, which has ten piles, and is protected against the ice by a steel plate, 6 feet by 6 feet, 7-16 inch thick. The piles of each cluster are well secured together by screw bolts.

The boom stands in 9 feet of water at extreme low water level, and in 14 at extreme high water level.

The timber used is 12 by 12 inch hemlock for the booms, and round pine and oak 14 inches at butt end, for the piles.

The work was commenced in November, 1900, and completed in April, 1901, at a cost of $1,504.45.

During the spring 1904, the head and two intermediate clusters of piles were broken by the ice, and the boom was also much damaged. A close-faced cribwork ice-breaker 20 by 12 feet and 18 feet high, was built in place of the head cluster of piles, to moor the boom; the two broken clusters of piles were renewed, the boom was repaired and sheathed diagonally with 3-inch pine deals.

The work carried out by day labour was completed on June 30, 1904, at a cost of $1,259.88.

ROBERVAL.

The town of Roberval, in the county of Chicoutimi, is built on the east side of the River Ouitchouanish, near its mouth, on the south shore of Lake St. John, 200 miles east of Quebec city and is the northern terminus of the Roberval branch of the Quebec and Lake St. John Railway which taps the main line at Chambord station.

In 1892-93, the department purchased from H. G. B. Beemer, Esq., for the sum of $750 an isolated block of cribwork 75 feet long by 30 feet, which had been built by him at the mouth of the river, 425 feet from the shore of the lake, together with the right of way to the public road.

During 1892-93 and 1893-94, this block was connected with the shore by means of an approach 425 feet long, by 25 feet wide, at a cost of $5,469.06.

In 1894-95, a head block parallel with the shore 50 feet by 30 feet and 30 feet in height, with a slip at the outer end, was added, and the entrance to the harbour was deepened and widened.

The cost of this work was $4,200.41.

This pier as completed in 1895, was 500 feet long and 25 feet wide generally, with the exception of the headblock, which measures 50 feet by 30 feet, and has 8 feet of water along its outer face, at low water and 19 feet at high water during the season of navigation. In the winter the lake recedes beyond the head of the pier which is completely dry all round. During the year 1896-97, a combined freight and shelter shed, 45 by 24 feet, was erected on the head block at an expense of $425.98.

In 1897-98, a block of cribwork, 75 by 25 feet, was sunk close to the crib purchased from Mr. Beemer for the purpose of widening that part of the wharf to 50 feet. Amount expended, $715.86.

In 1899, the wharf was destroyed by fire and rebuilt in 1900-1901, for a length of 500 feet, a width of 30 feet and a height of 23 feet, a waiting-room 15 by 18 feet and a freight shed 15 by 28 feet were erected on the wharf.

Amount expended, $9,747.82.

During the year 1902-03, the head of the wharf was widened 15 feet on the south side for a length of 60 feet by the construction of a block of cribwork, from that block a trestle work was built to the shore, the trestles are 8 feet apart and built of 12 by 12 spruce timber with four stringers of 12 by 12 ready to receive the sleepers, this extension was specially made to allow the Quebec and Lake St. John Railway to reach the wharf.

Amount expended, $4,577.11.

During the fiscal year 1903-04, the greater portion of the trestle work built last year was planked over with 3-inch plank and between trestle work and the wharf. stringers were laid, resting on a cap piece 12 by 12 inches, the stringers are 10 by 10 inches and covered with planking of 3-inch deals.

The amount expended was $653.45.

Total amount expended to July 1, 1904, $26,502.69.

SABREVOIS.

The parish of St. Anne de Sabrevois, in the county of Iberville, is situated on the east shore of the River Richelieu, 7 miles from Iberville, and 6 miles from St. Alexandre, on the Canadian Pacific Railway. It is a station of the East Richelieu Valley

Railway. It has the largest creamery in the province of Quebec, two cheese factories, one hotel, three stores, one door and sash factory, one post and telegraph office, and two churches, one Roman Catholic and one Protestant.

In order to better accommodate the traffic by water to and from this place, an old wharf with a right of way from the public road to the river, a distance of 1,372 feet, was purchased from Mr. Wm. Ryan, for the sum of $500. As the old wharf was dilapidated, a new wharf was built in its place.

The new structure consists of the following, viz.:—

(a.) A stone embankment 200 feet long by 20 feet wide, with slope 1 in 1 on the sides.

(b.) A trestle approach 120 feet long, 24 feet wide.

(c.) A head block of pile-work 108 feet long, parallel to the channel, by a width of 30 feet, with an ice-breaker of crib-work at its upstream end.

The work, carried out by day-labour, was commenced in February, 1900. The work was continued during the next fiscal year and completed in November, 1901.

In June, 1902, the sum of $988.07 was expended to raise, improve and fence the roadway.

During the spring of 1903, the road was under water for several days and greatly damaged by the waves. During March and April, 1904, the road was raised 2 to 3 feet for a distance of 500 feet from the wharf, 15 feet wide on top, with stone and gravel.

The work was completed in June of the same year. Expenditure during the fiscal year, was $693.14.

Total expenditure on that work, $8,264.91.

ST. ALEXIS.

St. Alexis, is on the south shore of Ha! Ha! bay, River Saguenay, about 63 miles from its mouth.

In order to accommodate the increasing trade of the locality and afford landing facilities at this place for the steamers frequenting the River Saguenay, the sum of $4,000 was appropriated at the session of parliament of 1898 for the construction of an isolated block. The block is 50 feet long by 25 feet wide, and 27 feet high, the outer end is a distance of 1,446 feet from the high water mark of spring tides.

In 1899-1900, two blocks, one 80 feet and the other 68 feet in length were built from shore in view of connecting the outer block; these blocks are 25 feet wide and 20 feet high at the outer end.

The expenditure was $3,999.

In 1900-01, an addition of 250 feet long and 25 feet wide was built at the cost of $4,016.63.

During the year 1902-03, an extension to the shore wharf, 150 feet in length, 25 stone, were constructed 25 feet south of the work commenced in 1898; they are placed from each other and are 21, 22, 23 feet in height respectively.

Expenditure, $4,000.01.

During the year 1902-03, an extension to the shore wharf, 150 feet in length, 25 feet wide, and 21 feet high at the outer end, was built. The work done is open-faced cribwork, and built 11 x 11-inch face timbers with fenders at every 10 feet, the flooring is of 3-inch red spruce. The structure is filled with stone. Expenditure, $3,994.71.

During the last fiscal year, five piers located 25 feet apart, were built, the first one from the old work is 20 by 35 feet, with a landing slip, the other four are 20 by 25 feet, a portion of the wharf built last year was completed with stringers and flooring, the span and the top of the first pier were also completed, the stringers are 10 by 12 inches, the four other piers are ready to receive the corbels and stringers.

Amount of expenditure during the year, $4,082.35.

Spring tides rise 18 feet; neaps, 11 feet.

Total of expenditure, $24,067.41.

ST. ALPHONSE.

St. Alphonse de Bagotville, is at the head of Ha ! Ha ! bay, on the southern shore of River Saguenay, sixty-six miles from its mouth.

A landing pier was built here prior to confederation by parochial authorities at a cost of about $3,200. In 1876, an arm was built by the department on south side of this pier. 55 feet long by 26 feet wide, at a cost of $3,084.34.

In 1881, the pier was strengthened and repaired at a cost of $3,897.20. During 1881-82, 378 feet of the original pier which had been burned down to low water level at the shore end was rebuilt for an average height of 10 feet, a large portion of the flooring renewed and other repairs effected, at the cost of $2,204.59.

In 1882-83, a block of cribwork was sunk close to the pier and filled with stone.

Expenditure, $4,307.40.

During the year 1883-84, the block was completed at the cost of $3,586.03.

In 1884-85, the work executed consisted in raising the wharf 2 and 3 feet over its length, constructing a movable slip and erecting an open shed 80 by 66 feet on the outer end.

Expenditure, $4,680.55.

Repairs were made to the flooring of the wharf in 1887-88, at a cost of $216.98.

In 1888-89, the flooring of the wharf was renewed for 300 feet of its length and a slip was built.

Expenditure, $1,024.54.

In 1889-90, the flooring at the end of the wharf was renewed and other repairs executed at a cost of $809.27.

During the year of 1890-91, the planking of the wharf was renewed over the western 200 feet, a quantity of stone ballast was put in.

Expenditure, $1,000.

In 1893-94, the work executed consisted in sheathing a length of 260 feet with six inch red spruce.

The expenditure amounting to $1,200.

During the fiscal year 1896-97, a shed 30 by 45 feet was built on the eastern side of the pier, the face timber on the slip was renewed.

The expenditure, $487.78.

In 1898-99, the planking and stringers have been completed on a length of 275 feet, and the north-east side of the pier was sheathed with 5-inch tamarack over a length of 275 feet.

The work was done by day labour at a cost of $3,000.57.

During the year 1899-1900, the north and south sides of the pier for a distance of 250 feet was sheathed with 5-inch tamarack and the planking was renewed over the same length at a cost of $548.

The wharf is 436 feet in length 24 feet in width, with an outer block of 40 feet in length by 85 feet in width, with a depth of 18 feet of water at low water spring tide at the outer end of the wharf giving the structure a total height of 40 feet.

The work done during the year 1902-03, consists in general repairs to the flooring, the shed, and new fenders. The shed was roofed with sheet iron.

The amount expended was $1,500.

During the fiscal year 1903-04, a crib 30 by 30 feet was built on the west side of the wharf with a landing slip, this crib is built of open face timber, sheathed with 3-inch plank and fendered every 8 feet with 8 by 10 inch timbers, it is ballasted and entirely completed.

The sheet iron roof of the sheds was renewed, a new waiting-room, freight shed, and cheese cold storage room were built and painted, the repairs to the flooring were commenced.

Spring tides rise 18 feet, neaps 11 feet.

Amount expended in 1903-04, $2,465.77.

Total expenditure by municipality, $3,200.
Total expenditure by federal government up to July 1, 1904, $35,862.49.

ST. ANDRÉ.

The village of St. André, in the county of Temiscouata, is situated on the south shore of the St. Lawrence, about fifteen miles west of River du Loup and 100 miles below Quebec.

The place is somewhat frequented as a summer resort; it contains a foundry and an important machine factory.

Spring tides rise 19 feet; neaps, 12 feet.

The wharf owned by the Department of Public Works at St. André, consists of an earthern embankment 850 feet long with a mean height of 6 feet and nine piers connected by platforms of 30 feet spans.

During the months of September and October, 1903, the repairs and improvements to the earth approach to the wharf have been continued; a length of 253 feet was thoroughly repaired, the expenditure being $750.

In the course of the month of May, 1904, the construction of an addition to the wharf, 80 feet in length, on a width of 26 feet, was commenced. At the close of the year, nearly three-quarters of the structure was built; it consists of close-faced crib-work filled with stone. The work has been done by day labour at a cost of $3,120.42, forming a total expenditure of $3,120.42 for the fiscal year 1903-04.

ST. CHARLES DE CAPLAN.

St. Charles de Caplan is on the north shore of the Baie des Chaleurs, in the county of Bonaventure.

During the year 1903-04 a contract was let to build a breakwater at this place for the sum of $13,700. The work is to be 400 feet long and 20 feet wide.

The work done during the year 1903-04 amounted to $5,118.80, but was not completed at the end of the fiscal year.

ST. FELICIEN.

St. Felicien, a post village in Chicoutimi county, is on the Assametquagon river, 15 miles from Roberval, on the Quebec and Lake St. John Railway, it contains one Roman Catholic church, 5 stores, 1 hotel, and four saw-mills. Population, 1,200.

During the year 1895-96 a wharf was built to accommodate the local trade. It is 70 feet in length, 26 feet in width and 22 feet high at the outer end, at which vessels drawing 8 feet can lie at low water. A shed 20 feet square was erected on the wharf at its outer end.

During the year 1899 an addition 90 feet long, parallel with the channel, and 40 feet wide was constructed at right angles to the wharf at its outer end.

During the year 1900, the sheathing which had been damaged by ice, was renewed on a length of 30 feet and 10 feet high at a cost of $100.

During the fiscal year 1903-04, 15 boulders obstructing the channel were removed. Amount expended $302.94.

Total expenditure up to June 30, 1904, $3,503.81.

ST. FIDÉLE.

St. Fidèle, is situated on the north shore of the St. Lawrence, 9 miles below Murray Bay and in the county of Charlevoix.

During the fiscal year 1903-04, the sum of $3,704.85 was expended for the purchase of timber to be used in the construction of a wharf at this place. It was afterwards decided to build the work by contract.

ST. FRANÇOIS, ISLAND OF ORLÉANS.

St. François, is situated at the lower end of the Island of Orleans, in the county of Montmorency.

During the fiscal year 1903-04, the isolated block commenced in 1902-03, on the south shore of the island, was completed, the work was done by contract.

The expenditure for the year 1903-04, was $8,305.96.

ST. FULGENCE.

St. Fulgence (otherwise called L'Anse aux Foins) is a small village in Chicoutimi county, on the north shore of the Saguenay river, ten miles below Chicoutimi.

It contains one Roman Catholic church, four stores and two saw-mills.

During the year 1903-04 the construction of a wharf was commenced, it consists of a shore approach, 75 feet in length, 22 feet in width and 10 feet in height, and of a block of cribwork 25 x 22 feet, 14 feet high, placed at a distance of 25 feet from the outer end of the approach.

This work is built of round logs open-faced, and intended to be sheathed; the whole is fully ballasted.

Expenditure, $998.37.

Spring tides rise 20 feet, neaps, 13 feet.

ST. GÉDÉON ISLANDS.

St. Gédéon Islands, Chicoutimi county, in the parish of St. Gédéon, are situated near the south-east shore of Lake St. John, thirty-nine miles west of Roberval. The parish contains one Roman Catholic church, several stores, post office, two cheese factories, two saw-mills, telegraph and railway station. Population, 1,200.

During the fiscal year 1903-04, a certain quantity of timber was purchased in view of the construction of a wharf at that place.

Amount expended, $2,172.04.

ST. IRENÉE.

St. Irenée, is situated on the north shore of the St. Lawrence, in the county of Charlevoix.

During the fiscal year 1903-04, the sheathing of the extension to the wharf, built in 1902-03, was completed.

The expenditure for the year 1903-04, was $7,613.06.

ST. JEAN CHRYSOSTÔME.

Every spring, during the freshets, the English river and the Black river overflow and cause considerable damage in the village and parish of St. Jean Chrysostôme, an area of about 2,600 square arpents of land, is under three to five feet of water during several days. In order to prevent, or at least considerably diminish those disastrous floods, it was decided to deepen the bed of the English river from its confluence with the Black river, opposite the village of St. Jean Chrysostôme, on a distance of 500 feet a width of 60 feet and a depth of 4 feet. At that place the bed of the English river is solid rock and 4 feet higher than the normal bottom, acting as a dam which causes the water to overflow upon the surrounding low lands. To that effect, the sum of $5,000 was voted by parliament during the session of 1903.

During November, the same year, the sum of $892.98 was expended to procure and install a steam rock drill and boiler, and to blast and remove a certain quantity of rock, but owing to the short days and cold weather, the work had to be suspended, it was resumed in May, 1904, and continued until June 30, but was not completed.

The work was carried out by day labour.

Expenditure during fiscal year 1903-04, $2,875.69.

ST. JEAN, ISLAND OF ORLÉANS.

St. Jean is situated on the south shore of the island of Orleans, in the county of Montmorency.

During the fiscal year 1903-04, the flooring of the wharf was partly renewed and the sheathing was repaired.

The expenditure for the fiscal year 1903-04, was $1,266.53.

ST. JEAN PORT JOLI.

The village of St. Jean Port Joli, in the county of L'Islet, is situated on the south shore of the St. Lawrence, 60 miles below Quebec. Spring tides rise 21 feet; neap tides, 13 feet.

The wharf at that place has a total length of 454 feet; a depth of water of 5 feet is left at the outer end, at low water spring tides. The wharf consists of a shore part or approach composed of platforms connecting piers, 180 feet long and 18 feet wide; a middle section 174 feet in length, open cribwork and a head block 100 feet long, 30 feet wide, close-faced cribwork. This wharf was vested in the Crown only a few years ago, and was in a bad state of repairs.

In the fiscal year 1902-03, the top planking, which was worn out, has been entirely renewed.

During the fiscal year 1903-04, the following works were performed: 25,000 feet B.M. of spruce deals, 4 inches thick, have been used in sheathing part of the face timbers damaged by ice; 8 mooring posts were renewed and 500 lineal feet of cap pieces have been replaced. The stringers of two platforms of 30 feet spans were renewed, and general repairs done to the shore end or approach.

These works were done by day-labour at the cost of $1,116.41.

ST. JÉRÔME.

St. Jerôme, Chicoutimi county, is a village situated on the south-east bank of Lake St. John, 24 miles east of Roberval; besides the church, post office, telegraph and railway station, the parish contains several stores, 3 cheese factories and 2 saw-mills.

The wharf built at this place in 1899-1900 consists of an approach 75 feet in length, 25 feet in width and 15 feet in height, filled with ballast, sand, &c., two outer blocks 75 feet in length by 25 feet in width and 25 feet spans between, which are connected by stringers and planking. The total length of the wharf is 275 feet, planked over on its whole length.

Amount expended $4,999,28.

During the year 1900-01, an addition 400 feet long, 25 feet wide and 24 feet high was commenced.

Amount expended $6,933.90.

In 1901-02, the extension was completed.

Amount expended, $1,999.97.

During the year 1902-03, a block 60 feet in length by 25 feet wide and 27 feet in height, was sunk in 7 feet of water at low water, 110 feet from the present wharf, with the intention to connect this block by the construction of two piers and spans. The

block was built with a landing slip, and the head sheathed with 8-inch hardwood planks and ballasted with stones.

Amount expended $2,595.20.

During the fiscal year 1903-04, two blocks of cribwork were built in the space between the outer block and the wharf, the corbels and stringers 10 by 12 inches for two of the spans were laid and covered with 3-inch planks.

The amount expended was, $2,191.92.

Total amount of expenditure to July 1, 1904, $18,674.99.

ST. MARC DE COURNOYER.

St. Marc, is a post village and parish, in Vercheres county, on the Richelieu river, 9 miles from Beloeil station, on the Grand Trunk Railway. It contains one Roman Catholic church, 3 stores, 2 grist-mills and cheese factory. Population, 968.

In August, 1901, an old wharf, built by the citizens of the locality, situated about two miles above the village, was given to the Crown free of charge, and the construction of a new wharf, at that site, was commenced. It consists of a head block of pile-work, laid at the outer face of the old wharf; the new work has a length of 87 feet, by a width of 16 feet for 63 feet up stream, and a width of 32 feet for the remaining 24 feet ; at its upstream end, there is a close timber ice-breaker, 4 feet higher than the flooring of the head block. The outer face of the head block is 16 feet high, and stands in 9 feet at low water.

The old wharf, which is used as an approach to the new one, has been raised about 4 feet to the level of the floor of the head block, with stone and a layer of gravel and sand on top, the sides of the approach are rip-rapped and slope 1 in 1.

The work, carried out by day labour, was completed in June, 1902, at a cost of $3,245.67.

During the fiscal year 1903-04, a storehouse 16 x 20 feet was erected on the wharf, and the width of the stone approach was increased by 10 feet.

The work was completed in June, 1904, at a cost of $501.93.

Total expenditure on that work, $3,744.54.

ST. MATHIAS.

St. Mathias, is a post village and parish in Rouville county, on the Richelieu river. It contains a Roman Catholic church, 1 hotel, 2 stores, 1 saw-mill and 1 butter factory. Population, 657.

In order to better accommodate the traffic carried out on the public wharf, built in 1902-03, two storehouses were erected, one small and portable, 12 x 12 feet, on the wharf, intended to be removed in the fall after the close of navigation, and replaced in the spring after the floods ; and a larger and permanent one, 20 x 24 feet, placed about 300 feet inland from the wharf, above the highest water mark.

The work was completed June 30, 1904. The expenditure during the fiscal year was $480.31.

ST. MICHEL.

St. Michel, in the county of Bellechasse, lies on the south shore of the St. Lawrence, fifteen miles below Quebec.

The site of the village is picturesque and the place is frequented as a summer resort. The coasting steamer ' Champion ' calls there twice a day, giving good facilities for the shipment of farm produce.

Spring tides rise 21 feet; neap tides, 13 feet.

Since 1900, heavy repairs have been done to this wharf, which is 1,100 feet long, 30 feet wide, with a headblock 50 x 40 feet.

During the fiscal year 1903-04, the repairs have been continued and the following works were performed: renewal of the face timbers for a length of 240 feet, on a mean height of 7 feet; one thousand feet of new cross-ties and longitudinals have been put in ; the top planking was renewed over a surface of 7,200 square feet ; the fenders and sheathing, on a length of about 200 feet, have also been replaced with new timber, the shed standing on the headblock, and all the mooring posts were painted. The expenditure amounting to $2,412.34.

Owing to the scouring of the bottom by the waves and current, the headblock had settled down and it became necessary to drive a row of sheet piles around its faces. During the month of May, 1904, 110 pieces of pitch pine, 10 x 12 inches, in lengths of 30 to 37 feet, were purchased; a pile driver was also constructed.

During the month of June, the driving of the piles was started, and at the close of the fiscal year, the work was progressing rapidly. The amount expended during the year was $5,442.47.

ST. NICHOLAS.

St. Nicholas, county of Lévis, is situated on the south shore of the St. Lawrence, fifteen miles above Quebec.

During the fiscal year 1903-04, the sum of $142.14, was expended in minor repairs to the wharf at this place.

ST. SIMÉON.

St. Siméon, is situated on the north shore of the St. Lawrence, in the county of Charlevoix, eighteen miles below Murray Bay.

During the fiscal year 1903-04, the sum of $2,992.20 was expended in the purchase of timber for the construction of an extension to the isolated pier towards the shore. It was decided afterwards to build the work by contract.

ST. VALENTIN, NOW ST. PAUL DE L'ILE AUX NOIX.

St. Paul de L'Ile aux Noix, is a post village and parish in St. John's county, on the River Richelieu, two miles from Scottsville, on the Grand Trunk Railway, and twelve miles south of the town of St. John's. It contains one Roman Catholic church, five stores, three hotels, one brick factory and telegraph office. Population, 614.

During May and June, 1904, the landing pier, built at that place in 1897 and 1898, was repaired. Corbels and stringers 6 x 12 inches, were placed between the existing ones which are 6 feet 4 inches apart on the piles approach and headblock of crib-work: three-fourths of the flooring was renewed, and a storehouse, 16 x 20 feet was erected on the wharf.

The work carried out by day labour, was completed June 30, 1904, at a cost of $1,158.15.

ST. ZOTIQUE.

St. Zotique, is a post village and parish, in Soulanges county, on the north shore of Lake St. François, two and a half miles west of Coteau Landing. The village contains one Roman Catholic church, two hotels, two stores and one telegraph office.

The wharf at that place consists of a headblock 132 feet 4 inches in length by 24 feet in width, while the approach, composed of thirty-four cribs, placed at intervals of 20 feet, varies from 8 to 12 feet in width.

During June, 1904, several stringers of the approach were renewed, and the flooring of the head block and approach were repaired.

The work was carried out by day labour at a cost of $509.01.

STE. ANNE DE LA PÉRADE.

Ste. Anne de la Perade, is a post village in Champlain county, on the River Ste. Anne and on the Canadian Pacific Railway, six miles from Batiscan, fifty-five miles west by north of Quebec. It contains one Roman Catholic church, one match factory and one butter and seven cheese factories, two hotels and a dozen stores. Population, village and parish, 2,550.

During the fiscal year 1903-04 repairs were made to the upper and lower dykes built in 1894 and 1895 and forming a system of protection against the considerable erosions that have occurred at that place after the land slide at St. Albans. A dyke of dry stone, 10 feet wide at the base, 4 feet wide at the top and 4 feet high, was built on the western bank of the west channel, from the municipal iron bridge, up stream, for a distance of 900 feet, to protect the buildings of that part of the village against the shove of ice during the spring freshets. A dyke had been built of dry stone at the head of St. Ignace channel, to prevent the yearly erosions along the banks of that channel, but was an inconvenience to the riparian owners who take their supply of water from the channel, in order to remedy this, a culvert 3 feet wide and 5 feet high was made at the bottom of the dyke.

The work carried out by day labour was not completed June 30, 1904

The expenditure during the fiscal year was $3,000.

STE. ANNE DE LA POCATIÈRE.

The village of Ste. Anne de la Pocatière, in the county of Kamouraska, is situated on the south shore of the St. Lawrence, seventy-four miles below Quebec.

Spring tides rise 20 feet; neap, 12 feet.

The wharf at that place consists in an approach built of stone and earth, together with twelve piers, 20 feet square, connected by platforms of 25 feet span.

During the winter of the year 1902, this wharf was almost totally destroyed by an ice-shove. Five piers were carried away a distance of nearly 100 feet and badly damaged; of the seven others, two were much injured and had to be completely rebuilt ; the top planking was broken and scattered about.

In March, 1903, a sum of $70.15 was expended to gather and save the broken timbers of the wharf.

The reconstruction began during the month of May, 1904, and at the close of the fiscal year ended June 30, 1904, the work was progressing. One of the cribs, which had not been too much damaged, was floated and put in place; the new cribs are being built more substantially and of greater dimensions, being made 30 feet square instead of 20 feet. Nearly all the timber, necessary to complete the work, has been bought and paid for.

The work was done by day labour at the cost of $4,280.70.

STE. ANNE DE SOREL.

The village of Ste. Anne de Sorel, in the county of Richelieu, is situated on the south shore of the St. Lawrence at the head of Lake St. Peter, two miles below Sorel. In order to prevent the ice being carried on the low lands during spring freshets, ice piers have been built in the vicinity of Ste. Anne and on Chenal du Moine opposite.

During the fiscal year 1903-04, the ice pier opposite Sheppard's Mill was repaired and raised 7 feet at a cost of $725.

At Ste. Anne de Sorel, a new pier, 20 by 24 feet, 15 feet high, was built on the property of Damase Lavallée, also a new one on Ile du Moine, to replace the old pier which was beyond repair. Another pier in this vicinity was repaired, at a total cost of $3,793.38.

On the west side of the Richelieu river a new pier was built, 20 by 24 feet and 18 feet high, at a cost of $2,997.92, making a total expenditure, for the fiscal year 1903-04, of $7,834.13.

STE. ANNE DES MONTS.

The sum of $199.45 was expended towards the removal of 250 cubic yards of stones placed in cribwork 40 by 15 by 10 feet, built as a training pier, and to be used for the loading of small boats at the mouth of the little Ste. Anne river, county of Gaspé.

STE. ANNE DU SAGUENAY.

Ste. Anne du Saguenay, Chicoutimi county, is situated on the north shore of the Saguenay river, 72½ miles above Tadousac, and opposite the town of Chicoutimi. Its population is about 2,000. Besides the church and post office, the parish contains seven stores, four cheese factories, a lime-kiln, a brickyard, a pottery and a saw-mill. The only market for the produce of the farms of this section of the north shore of the river is Chicoutimi.

Spring tides rise 17 feet; neaps, 9 feet.

Construction.—As early as 1879, the Dominion government was urged to construct a landing pier for the accommodation of the inhabitants of the district. The request was not, however, considered until 1888, when a portion of the timber for the proposed structure was purchased at a cost of $2,100.

In 1889, the pier was commenced from shore outward, and at the close of the year 1888-1889, a portion 77 feet long and 30 feet wide on its lower or eastern face had been completed at a cost of $2,109.60. It was built of close-faced cribwork, filled with stone ballast. In 1890 this shore block was extended 87 feet on a width of 27 feet, at a cost of $2,045.50, and in 1891, a further length of 50 feet of similar work was built at an additional cost of $2,498.96.

In 1892, a headblock 30 feet long, 60 feet wide and 20 feet high was built at a distance of 250 feet from the end of the work, completed the previous year, at a cost of $2,262.11, and in 1896 this block was raised 8½ feet and put on the same level as that of the work built out from shore, viz., 6 feet above ordinary high water spring tides.

With a view of completing the pier to shore, a sum of $5,575.25 was expended in 1897 for the construction of two cribs, each 87½ feet long, and 25 feet wide, placed 25 feet apart and 25 feet from both the head and shore blocks.

During the year 1898, the three 25-foot openings left in the work were spanned, the flooring was laid and the structure completed to shore at a cost of $746.70. The pier is now 494 feet long, 39 feet wide for the first 95 feet from shore, 27 feet wide for the following 119 feet, 25 feet wide for the next 250 feet, and finally 60 feet wide for the last 30 feet. It is 28½ feet high above the bottom of the river, at its outer end, and stands in 7½ feet of water at low water spring tides. It is substantially built throughout of close-faced cribwork filled with stone ballast. Some boulders were removed in 1894 from the vicinity of the head of the pier at a cost of $99.30.

During the whole season of navigation a steamboat performs a regular ferry service every hour from Ste. Anne to Chicoutimi.

During the year 1899, the planking of that part of the pier constructed in 1888 was renewed over a length of 250 feet, the sides of the cribs built in 1897 were sheathed on a length of 200 feet and fenders were placed at the angles.

The work was done by day-labour, at a cost of $1,099.81.

During the year 1900, the outer block for 110 feet was sheathed with tamarack, about 300 feet of the planking was renewed with 3-inch tamarack at a cost of $1,499.99.

During the year 1901, the sum of $2,507.36 was expended in renewing the planking of the wharf over a length of 240 feet and a width of 25 feet. The upper side of the wharf was sheathed over a length of 110 feet, with 6-inch tamarack, and a shed, 45 feet by 30 feet, was also erected on the wharf.

During the year 1901-02, a crib 40 feet wide and 27 feet high, was constructed at the eastern extremity of the wharf. It is fully sheathed with 5-inch tamarack. The flooring of the wharf was renewed on a space 200 feet long and 27 feet wide.

Expenditure, $3,102.07.

During the fiscal year 1902-03 a movable slip was built, a wating-room was commenced, the flooring of the wharf was renewed at different places.

Expenditure, $1,523.30.

The wharf stands to-day 475 feet in length, 30 feet wide for the first 130 feet from shore, 27 feet wide for the next 325 feet, and finally 100 feet for the last 30 feet of its length, it stands 28½ feet high above the bottom of the river at its outer end in 7½ feet of water at low water spring tides.

The wharf has a return on the western side of the shore end 120 feet in length, 32 feet wide, which reaches the rock bank of the river.

During the fiscal year 1903-04, the shed was covered with sheet iron, the waiting-room was completed, a freight shed was built, and the flooring was repaired.

Amount expended during the year $1,101.80.

Total expenditure to July 1, 1904, $29,124.26.

STE. EMILIE.

Ste-Emilie, county of Lotbinière, is on the south shore of the St. Lawrence.

During the fiscal year 1903-04, the sum of $156.87 was expended in building a trestle roadway from shore to the isolated block, on which a small shed 12 by 12 feet, was also built.

STE. FAMILLE, ISLAND OF ORLEANS.

Ste. Famille, is situated on the north shore of the island of Orleans, in the county of Montmorency.

On May 28, 1904, a contract was awarded for the sum of $17,664 for the construction of an extension to the wharf at this place.

The structure is 200 feet long, 30 feet wide and 21 feet high at the outer end.

At the end of the fiscal year 1903-04, the work was progressing, the amount paid to the contractors was $3,704.85.

STE. GENEVIÈVE.

Ste. Geneviève, is an incorporated village in Jacques Cartier county, on Rivière des Prairies, three miles from Beaconsfield, the railway station, and five miles from Pointe Claire. The village contains one Roman Catholic church, one convent, one commercial college, two hotels, butter and cheese factories, one telegraph office and fourteen stores. There are excellent mineral springs in the vicinity.

Population, 1,186.

During the fiscal year 1903-04 the following repairs were made to the pier at that place ; the two top tiers of timber of the three cribs and abutment were renewed ; 12 x 12-inch post was placed inside the down stream corners of each crib and secured to every piece of the face timber with screw bolts ; the wooden stringers were replaced by three 18-inch I-steel beams with three rows of channel iron between, and 6-inch I-steel beams laid across every three feet and secured to the main beams ; new flooring of 3-inch pine deals was laid diagonally and an iron guard railing was placed on both sides.

The work carried out by day labour was completed on June 30, 1904, at a cost of $2,492.94.

SHIGAWAKE.

Shigawake is a post village on the north shore of Baie des Chaleurs, in the county of Bonaventure.

During the year 1903-04, construction timber and ballast stone were purchased for the sum of $2,818.02. The work is to be done by day labour.

SOREL.

At the beginning of the fiscal year, viz., July, 1903, the crib superstructure was almost completed as well as the bents of the pile wharf, so that the work remaining besides the dredging was mostly to finish loading the cribs with stone and forming the earth embankment at the rear of the wharf. This progressed favourably, the material for filling being taken from the excavation.

Three dredges were at work part of the autumn and the excavating of the whole space along the new dock, to deep water (30 feet) was completed on November 13, 1903. The rip-rap revetment was laid along the slope at the rear of the earth embankment except about 50 feet in length at the south-east angle.

Thirty anchor tie-rods were laid in trenches to stay the pile wharf and resist the outward pressure of the sand against the framed structure. They are fastened by bolts to the post at the rear of the bents, and the other end is held in place by a heavy nut tightened against two cross pieces of channel iron, and a plank pannel buried in the sand.

In the spring of 1904, the stone filling of the cribs was completed and the earth filling levelled and made ready for the stone revetment. At the end of June the work remaining to be done consisted of the cast-iron mooring posts to be planted in concrete forms, and the stone surfacing over the whole of the wharf. The amount expended during the fiscal year 1903-04 was $44,224.75.

TADOUSAC—FISH HATCHERY.

During the fiscal year 1902-03 the dam of the fish pond was extended a further length of 60 feet, and the old portion sheathed with tamarack deals, the plank walk from the wharf to the pond, and a small kiosk built on a pier sunk in the pond, together with a plank approach thereto, the sum of $928.62 was expended.

During the fiscal year 1903-04, the kiosk was painted, and the dam was sheathed inside.

Amount expended $371.73.

Total amount of expenditure $1,297.11.

TADOUSAC WHARF.

Tadousac, or l'Anse à l'Eau, the chef-lieu of the county of Saguenay, is a watering place on the north-eastern side of the Saguenay river, about 5 miles above its mouth, which is much frequented by tourists and health seekers during the summer season. The village contains three churches, one of which is the oldest church built in Canada, having been erected in 1747, four hotels and stores, a telegraph office and many handsome villas, a fish hatchery has also been erected here by the Department of Marine and Fisheries.

Some 50 years ago, or more, the lumbering firm of Price Brothers & Co., of Chicoutimi, built at L'Anse à l'Eau, which constitutes the harbour of Tadousac, a wharf for their own use and convenience, of round logs and slabs, and partly faced the same with square timber and ballasted the work with stone. This wharf had a total length of 366 feet and a general width of 26 feet excepting a block at the west end which measured 4 feet by 50 feet by 29 feet in height, the depth available along its outer face at lowest water being about 7½ feet. In the absence of any other landing this wharf was not used alone by the firm who built it, but was also taken advantage of by the Richelieu and Ontario Navigation Company, as well as the general public.

The structure having become too dilapidated to be of further service for the public the federal government decided in 1880 to carry out the works of repairs required, to permit of the wharf being used for general shipping and landing purposes

as in previous years. Accordingly, in 1887-88 and 1888-89 the whole wharf was raised 3 feet, and a new plank floor put on throughout, a new inclined slip was also built. In 1889-90 a block 30 by 30 by 43 feet in height, was sunk 30 feet to the westward of the main structure, and in the following year the two blocks were connected by a timber span 30 by 30 feet, and in 1893-94 a new roadway or approach to the pier from the upland or embankment of earth 525 feet long by 25 feet wide was built.

The wharf as completed in 1894, has a total length of 225 feet on the outer or channel face, and is 108 feet wide for 165 feet in length at the eastern end, and 30 feet for the remaining 60 feet at the western end.

By a deed of sale dated December 10, 1896, Messrs. Price Brothers & Co., have conveyed to the federal government all their rights and interest to the wharf and the land on which it stands, as also to the roads and approaches thereto, for the sum of one dollar ; reserving however, the right of using in perpetuity a portion of the wharf 35 feet by 25 feet for the purpose of piling firewood thereon and the right of access to the wharf in perpetuity, to land, or ship merchandise as they may require, whether with steamers, schooners or other crafts.

During the fiscal year ended June 30, 1897, a combined shelter and freight shed waiting room, covering an area of 60 by 30 feet was erected close to the channel or southern side of the wharf, and this face has been sheathed with 5-inch tamarack for a length of 160 feet ; moreover the hand rails on the approach have been painted.

Expenditure incurred in 1896-97, $1,474.93.

During the year 1902-03 the roadway of the approach was repaired, the sheathing of the two western corners of the wharf were renewed with hardwood timber. The shed repaired and painted.

Expenditure $1,062.10.

During the fiscal year 1903-04, the wharf which had been broken by the steamer 'Virginia' was repaired.

Amount expended, $100.

Total expenditure to June 30, 1904, $19,480.34.

Spring tides rise 17 feet, neaps, 10 feet.

THREE LAKES.

Lake Megantic is about seventy-three miles south-east of Sherbrooke ; length, twelves miles ; average breadth, two to four miles, with a coast line of over thirty-six miles. This lake and the rivers that run into it form the head waters of the Chaudière river.

In 1885 a wharf was built at a point called Three Lakes or Flint's.

During May and June, 1904, the head of the wharf, which had been damaged by the ice, was repaired; the whole wharf was raised 2 feet, fully ballasted and a layer of gravel put on top, the road from the wharf was partly raised and improved and a small waiting-room was erected on the wharf. The work carried out by day labour was completed June 30, 1904.

The expenditure during the fiscal year was $731.88.

TICOUABÉ

Ticouabé, or St. Méthode, a post village in Chicoutimi county, is situated at the outlet of the river of the same name, twenty-one miles from Roberval.

A small landing was built at this place during the year 1897-98 to accommodate the local trade and to help its development. The wharf consists of a solid block of close-faced cribwork 30 x 30 feet, built a small distance from the shore and connected to it by a platform, supported on trestles, 103 feet long and 25 feet wide, a combined freight and shelter shed, 25 feet by 30 feet was also built.

Amount expended, $1,611.79.

In the spring of the year 1902-03, the wharf was badly damaged by ice.

During the fiscal year 1903-04 the trestles were renewed and the space between the trestles being too large their number was increased and corbels were put on to support the floor-stringers. The outer pier of the wharf was levelled and to prevent any sinkage and give it more strength the head was surrounded with pile-work.

Amount expended, $792.08.

Total amount of expenditure, $2,522.64.

TROIS PISTOLES.

Trois Pistoles in the county of Temiscouata, is an important village on the Intercolonial Railway, twenty-five miles below River du Loup. The land in the vicinity is fertile and the place is flourishing. It is somewhat frequented as a summer resort. Along the River Trois Pistoles, stand large saw-mills and a pulp-mill. Spring tides rise 18 feet ; neaps, 10 feet.

The harbour being much exposed to north and north-easterly winds, navigators were complaining of want of proper shelter for their craft ; it was decided to build a breakwater across the entrance of the harbour. During the month of May, 1904, the work was commenced. It consists of a crib 250 feet in length, 20 feet wide at the base, with a batter of 1 in 12 on the sides, to be built to a height of 14 feet ; advantage has been taken of a high bottom for the site of the breakwater which will stand about 2 feet above high water mark when completed.

At the close of the fiscal year, about two-thirds of the structure was built ; the work was done by day labour and the expenditure was $5,045.44.

A considerable quantity of materials, timber and iron, are now on hand and have been paid for out of that amount.

VERCHÈRES.

Verchères, is a post village and parish in Verchères county, on the south shore of the St. Lawrence river, and on the South Shore Railway, 21 miles from Montreal. It contains 1 Roman Catholic church, 4 stores, 1 hotel, 2 saw-mills and 1 butter factory. Population, 1,6-9.

The Richelieu and Ontario Navigation Company, has a small wharf at Verchères, but it being private property and inadequate for the requirements of the traffic, specially for the large shipments of hay, it was decided to build a public wharf.

The wharf consists of a head block of pilework 96 feet 6 inches long, by a width of 40 feet 4 inches, a pilework approach on a length of 224 feet by a width of 20 feet, and a stone embankment 300 feet long, by a width of 20 feet at the top with slopes of 1 in 1 on both sides.

The work, carried out by day labour, was commenced in November, 1903. It was suspended during the winter and continued in May, 1904 ; it was well under way at the end of the fiscal year.

The expenditure on the work to June 30, 1904, was $5,228.

PROVINCE OF ONTARIO.

BARRIE.

Barrie is situated in the county of Simcoe, 66 miles north-west from Toronto, on Kempenfeidt bay, Lake Simcoe, population 5,600.

At the session of parliament of 1903, the sum of $3,000 was re-voted for the construction of a wharf at this place, and on August 5, the same year, orders were given to proceed with the work by day labour.

The work consists in building a pile trestle wharf at the foot of Bayfield street, 200 feet in length and 20 feet in width. Plans and specifications were prepared and work commenced on August 7, 1903, and completed on January 31, 1904.

In doing the above work, some 110 piles ; 6,067 f.b.m. hemlock ; 8,250 f.b.m. pine ; 20,640 f.b.m. cedar were used.

Expenditure for fiscal year, 1903-04 :

Labour and superintendence	$1,515 01
Materials	1,710 92
	$3,225 93

BAYFIELD.

Bayfield, a village in the county of Huron, is situated at the mouth of the river of the same name, which empties into Lake Huron, 12 miles south of the town of Goderich. It contains one grist and saw-mill.

At the last session of parliament, the sum of $5,000 was appropriated to complete the extension of the southern pier at this place, for which a contract was given to Mr. James Clark of Goderich, on November 27, 1901, for the sum of $6,440, to construct the extension 120 feet in length and 30 feet wide, and to dredge berths for the cribs to 16 feet below low water.

Work was commenced in July, 1902, and the two cribs were placed in position in the fall of the same year, with the result that they were both, more or less, destroyed by the fall and winter storms. Operations were not commenced again until June last, 1903, and the work completed in December the same year.

Dredging to the extent of an expenditure of $2,000 was ordered on August 6, 1903, to be performed by the Marlton Dredging Co.

Expenditure for fiscal year, 1903-4 :—

To paid James Clark, amount of contract, $6,440, less one foot in height, not constructed	$6,756.70
To paid, inspection	380.00
	$9,136.70

BLIND RIVER.

Blind River is a village situated on the north channel, Lake Huron, in the district of Algoma. It is a station on the Canadian Pacific Railway. Extensive lumbering operations are carried on at this place.

At the session of parliament of 1903, the sum of $9,000 was appropriated to pay balance of contract for the construction of a wharf at this place, which contract was let to Mr. Robert Grant on February 11, 1903, and completed on August 13, the same year.

On November 10, 1903, the sum of $3,000 was authorized for the construction of a headblock, 100 feet by 30 feet, by day labour, which was completed in April, 1904.

Expenditure for fiscal year 1903-04:—

Labour and superintendence	$1,211 19
Materials	1,696 50
	$2,907 69
To paid, Robert Grant, balance of contract	$4,510 73

BOWMANVILLE.

Bowmanville, or Port Darlington, is situated on the north shore of Lake Ontario, county of Durham, forty-three miles from Toronto by rail on the Grand Trunk division of the main line between Toronto and Montreal. Population, 3,500.

At the session of parliament of 1903, the sum of $1.000 was appropriated to complete repairs to the breakwater at this place, and on August 5, the same year, authority was given to expend the amount by day labour.

Work was commenced on August 19, and completed on September 28, and consisted in filling in the breakwater with stone ballast, and repairing the main pier.

In doing the above work, some 12,250 f.b.m. pine, 10,610 f.b.m. 3-inch pine plank, 25½ toise of stone and 500 pounds iron were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 257 49
Materials	742 51
	$1,000 00

BRACEBRIDGE.

Bracebridge is situated on the north branch of the Muskoka river, county of Victoria, 125 miles north of Toronto. Population, 2,000.

At the session of parliament of 1903, the sum of $5,800, was appropriated for the construction of a wharf at this place, and orders were issued on November 26 last, to prepare contract plans and specifications for same, but owing to a change in location, this work has been delayed.

BRONTE.

Bronte is situated in the county of Halton, on the north shore of Lake Ontario, 27 miles south-east of Toronto.

At the session of parliament of 1903, the sum of $2,700 and $6,300 was appropriated for harbour improvements at this place, and on August 5, authority was given to expend the sum of $1,500, and on November 9, authority was given to expend $6,300 by day labour.

The work consists in the construction of 150 lineal feet of pilework, and two cribs, 50 x 24 x 13 feet, and renewing the superstructure 110 feet in length by 24 feet in width, the raising of the superstructure one foot in height for a distance of 40 feet, and placing a life chain, 450 feet in length, in position.

In doing the above work, some 77,881 f.b.m. hemlock; 50,710 f.b.m. pine ; 7,760 f.b.m. elm ; 110 cedar piles and 3,247 lbs. iron were used.

Expenditure for fiscal year, 1903-4 :—

Labour and superintendence	$1,316 09
Materials	4,823 19
	$6,139 28

BURK'S FALLS.

Burk's Falls is situated in the district of Parry Sound, on the Magnetawan river, and is a station on the Grand Trunk Railway, Northern Division. Population, 1,500.

At the session of parliament of 1903, the sum of $4,000 was appropriated to settle with Mr. David Conroy, who contracted on January 2, 1903, to build a wharf at this place, of pile trestle work, 300 feet in length, and 25 feet wide for the sum of $5,400, and for which the sum of $4,500 had been appropriated in 1902-3. The structure was completed on August 11 last.

Expenditure for fiscal year, 1903-4 :—

To paid Mr. Conroy, balance of contract. $900

Mr. Conroy was paid on progress estimates before June 13, 1903, $4,500.

Authority was given to erect a warehouse, and the work was performed by the Magnetawan Tanning and Electric Co., for the lump sum of $500. This work was completed June 24.

Expenditure during the fiscal year 1903-04, $1,780.75.

BURLINGTON CHANNEL.

Burlington channel in the county of Wentworth, is simply a cut through a piece of low land which partly separates Lake Ontario from a large sheet of water called Burlington bay, enabling vessels to reach the wharf at the city of Hamilton. Both sides of the channel are lined with piers.

At the session of parliament of 1903, the sum of $60,000 was appropriated to complete the repairs and the work of renewal of the superstructure at this place.

On October 19, 1901, a contract was let to Mr. James Clark, of Goderich, for $96,700 to reconstruct the superstructure of the west end of the south pier, and to protect the channel sides of both piers with sheet piling. The time for completion was extended to December 30, 1903 and again to July, 1904.

A dredge was employed from September 15 to November 14, removing stones obstructing the driving of the piling, and day labour was also employed to place the stone behind the sheet piling.

Up to June 30, 1904, 5,140 feet (lineal) of sheet piling has been driven, and 996 lineal feet of superstructure has been rebuilt.

The swing bridge staff were employed from July 1 to December 19, when the lights were put out, and navigation ceased for the winter, opening again on March 1, 1904, when they resumed duty.

Expenditure for fiscal year, 1903-04 :—

To paid	James Clark, progress estimates.	$52,773 82
"	Assistant Engineer and Inspector, (wages &c.)	2,978 66
"	wages of working staff on bridge.	1,702 00
"	maintenance of bridge and supplies.	1,445 65
		$58,300 13

CHRISTIAN ISLAND.

Christian island is situated in Georgian bay, county of Simcoe, and is distant from Penetanguishene, the nearest railway point, about twenty-six miles. The inhabitants are chiefly Indians, as this is an Indian reserve. Cordwood exportation and fishing are the chief industries.

At the session of parliament of 1903, the sum of $400 was appropriated for repairs to the wharf on the Indian reserve at this place, and on November 9, the same year, instructions were given to proceed with the work of repairs to the present structure built by the Indian Department. Work commenced on February 13, and was completed on May 6, 1904.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence.	$359 50
Materials.	40 50
	$400 00

COBOURG.

Cobourg is an incorporated town, in Northumberland county, situated on the north shore of Lake Ontario, on the Grand Trunk Railway, ninety-two miles west by south of Kingston, sixty-nine miles north-east of Toronto, and is a port of entry. It has several mills, foundries, breweries and a car factory. Population, 4,239.

At the session of parliament of 1903, the sum of $2,500 was appropriated for repairs to piers and dredging at this place, and on August 5, the same year, authority was given to expend the amount by day labour.

Work was commenced on August 14, and consisted in replanking the 'Langevin' pier, a length of 450 feet, 29 feet wide; renewing 150 feet of the east pier with stringers and planking 16 feet wide; the north-east corner of the east pier rebuilt from low water up, 100 feet in length, and 12 feet wide, and filled with stone, also repairing under the Customs warehouse with cross timbers and flooring.

In doing the above work, some 50,971 feet board measure pine; 27,550 feet board measure pine plank; 83,246 feet board measure cedar and 6,485 pounds iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$1,484 50
Materials	3,515 49
	$4,999 99

COLLINGWOOD.

Collingwood is situated on the south side of the Georgian bay, township of Nottawasaga, county of Simcoe, ninety-four miles by railway from Toronto. It is the terminus of the Northern and Hamilton and North-western Railways. There is an extensive trade in ship-building, grain and lumber, and it is the starting point of steamers for Owen Sound, Sault Ste. Marie, Parry Sound, &c. Population, 9,000.

As constituted now, the harbour is very large and commodious, being protected on the north and east sides by extensive breakwaters. Several small wharfs belonging to the town, or to companies, are built inside the area inclosed by these breakwaters.

At the session of parliament of 1903, the sum of $60,000 was appropriated for improvement in Collingwood harbour, and on September 14, the same year an agreement was entered into with Mr. C. S. Boone, to increase the width of the channel to 220 feet through the harbour, with an entrance at lake end of 300 feet, and to give a depth throughout of 20 feet at low water, to be paid for at the following rates (in situ) viz.: mud, 35 cents; hard pan, $1.40; rock, $2.30 per cubic yard. The agreement to be considered as a continuation of the work Mr. Boone had already performed, under contract in the harbour.

Work was commenced August 24, 1903, operations being suspended for the winter on December 5, up to which date the plant had removed, on continuation agreement, 12,403 cubic yards mud; 6,825 cubic yards hard pan and 500 cubic yards of rock. Work recommenced on May 4, and up to June 30, 1904, worked 528½ hours removing 4,001 cubic yards, and 10,621 cubic yards hard pan.

Expenditure for fiscal year, 1903-04 :—

Paid C. S. Boone, on dredging (continuation agreement)	$54,542 10
" " work in front of dry dock	10,245 60
" inspection	623 95
	$65,411 65

DEPOT HARBOUR.

Deport Harbour, is situated on the north-east shore of Georgian bay, in the district of Muskoka, 60 miles north of Collingwood, and about 3 miles by water from Parry Sound. It is the western terminus of the Canada Atlantic Railway system, and was selected by this railway company as a point of transhipment of the grain from the west ; it is distant from Ottawa, 263 miles by rail. In connection with this harbour the railway company operates between Chicago, Milwaukee, Duluth and Depot Harbour a fleet of large steel steamers of 4,000 to 7,000 tons each, which make return trips every week. It is a splendid natural harbour, three-eights of a mile in width, deep enough to accommodate the largest steamers on the lakes ; the entrance is sheltered by Supply island which lies about one mile to the westward.

The Canada Atlantic Railway Company has built two wharfs, one on each side of the harbour, of a total length of 3,000 feet with 22 feet of water at the face ; an elevator of 1,250,000 bushels capacity ; two freight sheds, each 700 feet long and 90 feet wide, with double tracks in the rear.

In 1900, the railway company applied for aid, to the amount of $200,000, towards the construction of further harbour improvements required for the increasing traffic of the harbour.

In May, 1902, a contract was awarded to Messrs. Davis, Haney & Miller for the construction of an additional length of 1,250 feet to the elevator dock on the nothern side of the harbour, towards Supply island, the contract price being $195,000.

During the fiscal year 1902-03, at the request of the Canada Atlantic Railway Company, the general lines of the works were changed, instead of building the extension 1,250 feet long and 60 feet wide, it was decided to build it 525 feet long and 80 feet wide,. and to construct a landing wharf, 400 feet long and 150 feet wide, at the inner end of the harbour.

These changes were accepted by the contractors at the original contract price. At the end of the fiscal year 1902-03, construction had not been commenced.

The extension consists of close-faced timber cribwork walls on the sides and outer end, with stone filling between and of an average height of 33 feet, to 7 feet above extreme low water, the cribs rest on an artificial stone foundation. The top is finished with broken stone in the middle and on the sides and outer end, for a width of 8 feet, it is planked over with 3-inch deals.

The landing pier, 400 feet long, consists of two lines of close-faced timber cribs sunk at a distance of 150 feet between their outer faces, and one crib at the outer end closes the space between the side cribs, the top of the crib standing one foot below low water, they are to be filled with stone and between them the filling is to consist of sand. The superstructure is to be built continuously to a height of 7 feet above low water.

At the end of the fiscal year 1903-04, the extension to the elevator wharf was nearly completed, and all the cribs of the landing pier, but one, were sunk and partly filled.

In February, 1904, the contractors agreed to build the superstructure of the landing pier with concrete instead of timber, without any increase in the contract price.

The amount expended during the fiscal year 1903-04, was $106,134.11.

GODERICH.

Goderich, in the county of Huron, is situated on the east shore of Lake Huron, at the mouth of the River Maitland about sixty-eight miles from Sarnia, and sixty miles from London.

It is the terminus of the Buffalo branch of the Grand Trunk Railway, and a place of considerable importance.

At the session of parliament of 1903, the sum of $20,000 was appropriated towards the construction of a breakwater off the entrance of the harbour at this place. Plans and specifications were prepared, and tenders are now being called for.

Soundings and borings were taken for the proposed breakwater, for which the following amounts were expended.

Expenditure for the fiscal year, 1903-04, $18,817.73.

GORE'S LANDING.

Gore's Landing is a small village of some 100 inhabitants, and is situated in the County of Northumberland, on the south shore of Rice lake, twelve miles from Cobourg.

At the session of parliament of 1903, the sum of $3,000 was appropriated for the construction of a wharf at this place, and on October 30, the same year, authority was given to do the work by day labour.

The work consisted in the construction of a pile wharf, 190 feet long with an 'L' end of 73 feet, the width varying from 70 feet at the shore end to 28½ feet at the outer end. The whole interior of the structure being filled with stone.

In doing the above work, some 423 oak piles; 108 cords of stone, 2,390 feet board measure 3-inch pine plank, 960 f.b.m. pine and 4,335 pounds iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$1,791 56
Materials	1,140 49
	$2,932 05

GRAND BEND.

Grand Bend is a village on the east shore of Lake Huron, about forty miles south of Goderich.

At the session of parliament of 1903, the sum of $5,000 was appropriated for the construction of a breakwater pier and dredging a channel at this place, and on November 12, the same year, orders were given to prepare contract plans and specifications.

A contract was let to Mr. John D. Warwick, on March 26, 1904, for the sum of $21,388, for the construction of the wharf.

Expenditure during fiscal year 1903-04, $298.64.

GRAND RIVER.

Dunnville is a town on the Grand river, in the county of Haldimand, five miles from Lake Erie.

On July 13, 1903, authority was given to engage the plant of Mr. C. S. Boone, to do the necessary dredging of the bar at the entrance to the Grand river, and also in the river at Dunnville, the terms being $12 per hour, removing 80 cubic yards per hour, and to June 30, the plant removed 130,252 cubic yards.

Expenditure for fiscal year, 1903-04 :—

To paid C. S. Boone, dredging	$ 9,634 00
" towage from Sarnia	533 00
" inspection	470 40
	$ 10,631 40

GRAND RIVER BRIDGE.

Grand River bridge is situated at the village of York, in the county of Haldimand, five miles from Caledonia, the nearest railway point.

On May 28, 1903, authority was given to expend the sum of $150 in making repairs to the embankment approaches to the bridge at this place, and the necessary work was done in August last, and consisted in repairing the washout of the embankment, caused by the heavy rains in the spring.

In doing the above work some eighteen cords of stone, 97 cubic yards of gravel and 327 lineal feet of 3-inch pine plank were used.

Expenditure for fiscal year, 1903-04 :—

To paid, repairs	$ 173 34
" caretaker (one year's salary)	25 00
	$ 198 34

HAILEYBURY.

Haileybury, a post village in Nipissing county, is situated on the west shore of Lake Temiscamingue, near the entrance into Wabi bay.

In the fiscal year 1900-01 the building of a wharf was commenced to accommodate the local trade.

No work was done on this structure during the fiscal year 1901-02.

During the fiscal year 1902-03, work on the wharf was commenced and some progress made with the construction of the approach.

During the fiscal year 1903-04 a close-pile head 40 x 60 feet dimensions with stone filling was built to a height of 7 feet above low water level, incorporating a smaller crib 20 x 30 feet dimensions, which had been sunk in 10 feet of water at an earlier date.

The stone approach which is 500 feet long and 18 feet wide on top was added to materially, but was not completed to its full height.

Expenditure for fiscal year 1903-04, $8,842.18.

Total expenditure to June 20, 1904 is $13,370.48.

HAWKESTONE.

Hawkestone is a small village on the north shore of Lake Simcoe, distant fifteen miles north-east of Barrie.

Authority was given on January 15, 1904, to expend the sum of $200 in repairs to the pier at this place. Work commenced on April 5, and consisted in repairing the decking of wharf.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 151 50
Materials	33 36
	$ 184 86.

HIAWATHA.

Hiawatha is the name of the Indian village on the Mississaga Indian reservation, in the township of Otonabee, about 12 miles south of Peterborough, and 15 miles north of Cobourg.

On December 29, 1903, orders were given to expend the sum of $300 to remove the stone from the old pier at Hiawatha, and $1,200 to construct a landing pier, by day labour.

The work consists of a timber wharf made up of cribs and spaces, there being three cribs, 16 x 20 feet, giving a total length of 84 feet. A road approach to the wharf was constructed 84 feet in length, 20 feet in width and 6 feet deep.

In doing the above work, some 12,192 feet board measure pine, 2,500 feet board measure hemlock, and 833 pounds iron were used.

Total expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 876 85
Materials	151 65
	$1,038 50

HILTON.

Hilton is a small village situated on St. Joseph's island, on the north channel of Georgian bay.

On August 13, 1903, authority was given to expend the sum of $40 in repairs to the wharf at this place.

In doing the above work, some 3,325 feet board measure pine plank were used.

Expenditure for fiscal year 1903-04 : Materials, $39.90.

HONORA.

Honora is a village on the east shore of Manitoulin island, district of Algoma, and is distant about twenty miles from Little Current.

At the session of parliament of 1903, the sum of $4,000 was appropriated for the construction of a wharf at this place, and on November 12 last, instructions were given to prepare contract plans and specifications, which was done and tenders called for.

The contract was let to Messrs. D. Porter and G. Kastner, on February 22, 1904, for $7,900.

KINCARDINE.

Kincardine, in the county of Huron, is situated at the mouth of the Penetangore river, which empties into Lake Huron, 31 miles south of Southampton. It is the terminus of the Wellington, Grey and Bruce division of the Grand Trunk Railway. Extensive salt deposits are found here.

At the session of parliament of 1903, the sum of $3,000 was appropriated for repairs to the piers and dredging at this place, and on July 18 last, orders were given to employ the Marlton Dredging Company's plant of Goderich to do what was required. Operations were commenced on September 22, 1903, and continued until November 4, during which time the plant worked 225½ hours, and removed 17,460 cubic yards.

On July 13, 1903, instructions were given to make the necessary repairs to the piers by day labour.

In doing the above work, some 950 feet board measure oak and 5,000 feet board measure hemlock plank were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 634 16
Materials	363 99
	$ 998 15
To paid Marlton Dredging Co.	$1,804 00
" " " towage	142 00
" inspection	144 00
	3,088 15

KINGSVILLE.

Kingsville, county of Essex, on the north shore of Lake Erie, about 25 miles east of the mouth of the Detroit river, on the Essex and Lake Erie Railway. Population, 1,600.

At the session of parliament of 1903, the sum of $4,000 was appropriated for filling the superstructure of the extension of the breakwater with stone ballast, and on November 9, 1903, orders were given to do the stone filling by day labour, with the expenditure of $1,000 and the balance being for the required dredging, and, as no plant was available, the dredging was not performed.

In doing the above work, some 72 cords of stone were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$652 61
Materials	346 35
	$998 96

LAKEPORT.

Lakeport, the port of Colborne, is situated in the west riding of the county of Northumberland, 14 miles east of Cobourg.

At the session of parliament of 1903, the sum of $3,500 was appropriated for repairs to the wharf at this place, and on October 30, the same year, authority was given to proceed with the work by day labour.

In doing the above work, some 14,338 feet board measure pine plank ; 1,236 feet board measure hemlock ; 50 feet board measure oak ; 53,492 feet board measure cedar ; 24 cords stone, and 8,237 pounds, iron were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 963 24
Materials	2,061 73
	$3,024 97

LANCASTER.

Lancaster, a post village in Glengarry county, on the River St. Lawrence, sixteen miles east of Cornwall and on the Grand Trunk Railway, fifty-four miles west of Montreal. Lancaster is a landing place of the Cornwall and Montreal steamers, and contains four churches, three hotels, fifteen stores, one iron foundry, one saw-mill, telegraph and telephone agencies and one printing office issuing a weekly newspaper. Population, 583.

During the month of October, 1903, the sum of $98.83 was expended to effectuate repairs to the stone approach of the public wharf at that place.

LEAMINGTON.

Leamington, is a village in the county of Essex, on Lake Erie, thirty-seven miles from Windsor.

At the session of parliament of 1903, the sum of $3,800 was appropriated for protection sheet piling, &c., to the wharf at this place. Orders were given on November 9, to proceed with the work by day labour.

In doing the above work, some 47,772 feet board measure pine, 75 feet board measure oak, and 9,929 pounds iron were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$2,368 40
Materials	1,365 25
	$3,733 65

LITTLE BEAR CREEK.

Little Bear Creek is in the counties of Kent and Bothwell, and empties into the 'Chenal Ecarte,' Lake St. Clair, about sixteen miles from Chatham.

At the session of parliament of 1903, the sum of $2,000 was appropriated for dredging at this place, and on October 14 last, orders were given to employ the Chatham Dredging Company's plant to do the work required.

The work consisted in giving a depth of 7½ feet through the navigable portion of the creek; about half mile of dredging was done, and some 21,600 cubic yards of material were removed. The plant worked from November 4 to December 1, 1903, and from April 7 to April 12, 1904.

Expenditure for fiscal year, 1903-04 :—

To paid Chatham Dredging Co	$1,720 00
" inspection	90 00
	$1,810 00

L'ORIGINAL.

L'Orignal, the chef-lieu of the county of Prescott, on the south shore of the Ottawa river, and sixty-six miles west of Montreal. It contains, besides the county buildings, four churches, Roman Catholic, Presbyterian, Episcopalian and Methodist, telegraph office, several insurance agencies, grist and saw-mills, five stores and two hotels. Two weekly newspapers are published in L'Original. Population, 1,026.

The public wharf at L'Original, rebuilt in 1898 to 1900 at a cost of $28,294.60, is one of the most important on the River Ottawa.

During April, 1904, the floor of the trestle approach, 700 feet long, has been re-doubled with 3-inch pine planks, the roof of the freight shed has been repaired and the stone embankment 623 feet long, has been repaired and regravelled.

The work was carried out by day labour at a cost og $974.52.

MCCRACKEN'S LANDING.

McCrackens' Landing is situated on the south shore of Stony lake, in the county of Peterborough, and is distant twelve miles north-easterly from Lakefield on the Trent Valley system.

On December 20, 1903, orders were given to construct a wharf at this place by day labour, the sum of $900 being authorized for same.

The work consists in the construction of a new crib wharf 30 feet square, nine feet in depth, planked on top, sheeted all round with 2-inch hemlock planks and filled with stone.

An approach leading to this wharf, 72 feet long, with an average depth of 4 feet and 20 feet wide on top, was also built.

In doing the above work, some 9,292 feet board measure hemlock, 3,456 feet board measure, cedar, 69¾ cords stone and 541 pounds iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$379 50
Materials	411 22
	$790 72

MCGREGOR'S CREEK.

McGregor's Creek, situated in the county of Kent, is a branch of the Thames river at Chatham.

At the session of parliament of 1903, the sum of $4,500 was appropriated for new sheet pile protection work and repairs to the old work at this place, and orders were issued on August 5, to proceed with the work.

An agreement was entered into with Mr. John Flook, on September 28, 1903, to provide and place piles 30 feet long, with anchor piles and waling complete, for $17 per lineal foot, 260 feet 6 inches lineal feet of pile-work was driven.

Expenditure for fiscal year, 1903-04 :—

To paid John Flook, as per agreement	$4,428 50
" inspection	107 50
	$4,536 00

MEAFORD.

Meaford is on incorporated town in the county of Grey, on the west side of Georgian bay, eighteen miles west of Collingwood, and twenty miles to the eastward of Owen Sound. It is the terminus of the northern division of the Grand Trunk Railway. Population, 2,500.

At the session of parliament of 1903, the sum of $20,000 was appropriated for the construction of a breakwater at the entrance to the harbour at this place ; plans and specifications for this work have been prepared and tenders called for.

The sum of $2,000 was also appropriated to complete repairs to the piers. The work consists in rebuilding some 300 feet in length of the superstructure of the east pier, from low water level; placing iron plates on the corners of the west pier, &c. Work was commenced on July 14, 1903, and was completed on June 27, 1904.

In doing the above work, some 17,564 feet board measure pine, 12,500 feet board measure cedar and 79 cubic yards of stone were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$1,251 38
Materials	1,053 15
	$2,304 53

MIDLAND.

Midland, Simcoe county, is at the terminus of the Midland division of the Grand Trunk Railway, on Georgian bay. Population, 3,500.

Large quantities of lumber are shipped to and from this harbour, and the railway company has two large grain elevators at this place. During the past two years the Canadian Iron and Furnace Company has erected large smelting works.

At the session of parliament of 1903, the sum of $12,000 was appropriated for dredging at this place, and the 'Owen Sound Dredge & Construction Co.' re-commenced work on June 29, 1903, and removed 79,982 cubic yards of material consisting of boulders and hard clay.

On November 2, 1903, a contract was let to Mr. A. A. McDonald, of Hamilton, for the sum of $19,492, to construct two pile wharfs, each 300 feet in length, for which an appropriation of $10,000 has been made. Work was commenced during the winter, fair progress being made.

Expenditure for fiscal year 1903-04, $26,012.16.

To paid Owen Sound Dredging Co., over-expenditure, 1902-03	$16,700 00
To paid Owen Sound Dredging Co., from June 29, 1903 to June 30, 1904	18,035 00
To paid inspection	638 45
	$35,375 45
To paid A. A. McDonald, progress estimate	4,320 00
" inspection	102 00
	$4,422 00

MONETVILLE.

Monetville, a new post town, is situated on West bay, Lake Nipissing, about thirty-five miles south-west of Sturgeon Falls, Ont.

In the fall of 1903, a wharf 40 feet in length, with a freight shed, was built to accommodate local traffic.

Expenditure for fiscal year 1903-04, $578.17.

MORPETH.

Morpeth is a village in the county of Kent, on Lake Erie, fifteen miles from Thamesville, and thirty-two miles from Chatham.

On October 30 last, authority was given to expend the sum of $200 in executing absolutely necessary repairs to the pier at this place, by day labour.

In doing the above work, some 7,036 feet board measure hemlock and 150 pounds of iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$ 62 00
Materials	137 81
	$199 81

MOUNT JULIEN.

Mount Julien is situated in the township of Burleigh, county of Peterborough, on the north shore of Stony lake, and is distant 15 miles from Lakefield, of the Trent Valley Canal system.

On May 20 last, orders were given to repair the wharf at this place, same to be charged against Hiawatha.

In doing the above work, some 1,000 feet board measure tamarack, 700 feet board measure hemlock ; 52 feet board measure pine and 65 yards of gravel were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$147 12
Materials	92 65
	$239 77

NEWCASTLE.

Newcastle is situated in the county of Durham, on the north side of Lake Ontario, 47 miles east from Toronto. It contains large woollen mills, a tannery and implement factory. Population about 1,000.

At the session of parliament of 1903, the sum of $8,000 was appropriated to complete repairs to the pier at this place. Work was commenced by day labour on August

10, 1903, and consisted in rebuilding the superstructure of the south end of the east or landing pier, 210 feet in length, 16 feet wide, and 160 feet in length, 36 feet wide, also 80 feet in length, 40 feet wide, of the north end of the same structure.

In doing the above work, some 171,329 feet board measure pine ; 7,035 pounds iron and 72 toise of stone were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$1,948 28
Materials	6,051 32
	$7,999 60

OAKVILLE.

Oakville is situated on the north shore of Lake Ontario, in the county of Halton, 29 miles west of Toronto. Population about 1,700. It contains several mills and factories and a shipyard. The trade of the place is local. It is a station on the Hamilton branch of the Grand Trunk Railway.

At the session of parliament of 1903, the sum of $6,000 was appropriated for repairs to the piers at this place, and on August 5 last, instructions were given and work commenced by day labour on August 22, 1903.

The work consisted in building two cribs and superstructure as headblock to the eastern pier ; one crib being 54 feet long, 24 feet wide and the other 78 feet long by 24 feet wide, giving a total length of 132 feet. Both of these cribs were placed in 16 feet depth of water. The moving of the lighthouse, and re-building the superstructure for a length of 50 feet and four feet in height.

In doing the above work, some 42,718 feet board measure, cedar and hemlock were used in cribwork, and 24,256 feet board measure, pine in the superstructure, also 6,253 pounds iron for bolts, 19½ toise of stone ballast and 5 white oak mooring posts.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$1,925 49
Materials	4,074 51
	$6,000 00

ORILLIA.

Orillia, in the county of Simcoe, is situated off Lake Couchiching, 89 miles north-west of Peterborough, and 23 miles north-east of Barrie. Population, 3,000.

At the session of parliament of 1903, the sum of $7,000 was appropriated for the construction of a wharf at this place.

The work consists in building a structure 200 feet in length, with a width of 20 feet of cribwork substructure and concrete superstructure.

A contract was let to Messrs. Green & McKinnon, on January 12, 1903, to perform the work for $8,389. Operations were commenced in April, 1903, and the structure was completed on October 30, the same year.

Expenditure for fiscal year 1903-04, $6,634.67.

OWEN SOUND.

Owen Sound is situated at the mouth of the Sydenham river, which flows into the head of Owen Sound, an arm of the Georgian bay, in the county of Grey.

The town is the centre of an extensive agricultural district, and is the terminus of the Grand Trunk Railway branch of the Georgian Bay and Lake Erie division, also of the Canadian Pacific Railway—Toronto, Grey and Bruce division. There are several lines of steamers running to and from Owen Sound. Population, 9,500.

At the session of parliament of 1903, the sum of $16,000 was appropriated for dredging and pile protection work at this place.

The contract with A. F. Bowman for deepening and dredging on the west side of the harbour at the entrance, for a bulk sum of $24,210, was completed on October 17, 1903.

Orders were issued on August 5, 1903, to remove obstructions, and Mr. Bowman's dredging plant was employed for the purpose, and removed 40,375 cubic yards.

Instructions were given on December 5, 1903, to put in extra anchor piles behind the new sheet piling on the west side of the harbour, and 100 piles were driven.

Expenditure for fiscal year 1903-04, $15,984.85.

PELEE ISLAND.

Pelee Island is situated on the western end of Lake Erie, in Lat. 40° 46′ N., Long. 28° 45′ W., about 35 miles south-east from the mouth of the Detroit river, and 16 miles south of the town of Kingsville, Essex county. Population of the island about 600. The products of the island are grapes, wine, fruit and farm produce.

At the session of parliament, of 1903, the sum of $1,200 was appropriated to complete payment to Messrs. A. M. McCormick & Son, to whom a contract had been let on December 15, 1902, to build an extension at the outer end of the wharf at this place, 50 feet long and 40 feet wide, for the sum of $3,500. Authority was also given to build a warehouse on the wharf. The extension was completed in August, 1903, and warehouse in September, the same year. A bonded wareroom was constructed in the warehouse in February.

Expenditure for fiscal year 1903-04 :—

To paid, McCormick & Son, final estimate		$1,300 00
" Jos. Ley, building warehouse		369 00
" " cornice on warehouse		31 00
" " bonded wareroom in warehouse		80 00
" " inspection		138 00
		$1,918 00

PENETANGUISHENE.

Penetanguishene, in the county of Simcoe, is situated on the north-eastern peninsula in Georgian bay, formed between Nottawasaga bay and the water of the Severn river, forty miles north-west of the town of Barrie. It is the terminus of the branches of the Grand Trunk Railway, and a large quantity of lumber is shipped thence from the north and east shores of the Georgian bay.

At the session of parliament of 1903, the sum of $7,000 was appropriated for dredging at this place, to continue the agreement with Messrs. Bowman & Co., to do the work required. Work was re-commenced on June 29, 1903, and operation ceased on November 24, and was resumed on June 6. 1904.

From June 29, 1903, to June 30, 1904, 56,720 cubic yards of material were removed.

Expenditure for fiscal year 1903-04 :—

Paid Bowman & Co.	$7,214 00
" inspection	472 94
	$7,696 90

PICKERING.

Pickering harbour, formerly known as Frenchman's bay, is situated on Lake Ontario, twenty-one miles east of Toronto.

At the session of parliament of 1903, the sum of $2,500 was appropriated for repairs to piers and dredging at this place, and on August 5, the same year, authority was given to expend the sum of $500 to complete the repairs to piers by day labour.

The work consisted chiefly in repairing the breakwater, which extends from north end of west pier to the beach, 120 feet in length of this structure has been rebuilt from low water up.

In doing the above work, some 270 feet board measure 2-inch pine, 1,947 feet board measure hemlock, 1,703 feet board measure pine and 367 pounds iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$403 80
Materials	96 20
	$500 00

POINT AU BARIL.

Point au Baril is a village of some 100 inhabitants, and is situated on the east shore of Georgian bay, forty miles north-west of Parry Sound, the nearest railway point. Fishing is the chief industry of the place.

At the session of parliament of 1903, the sum of $3,000 was authorized for the removal of obstructions in the channel from Parry Sound to Killarney, at Point au Baril and the Devil's Elbow, and on August 10, authority was given to have this work done.

Expenditure for fiscal year, 1903-04:—

Labour and superintendence	$ 485 25
Materials, dynamite, tools, &c	867 32
	$1,352 57

POINT EDWARD.

Point Edward, Sarnia, is situated in the county of Lambton, near the head of the St. Clair river, 61 miles west of London.

At the session of parliament of 1903, the sum of $10,000 was appropriated for dredging at this place, and on July 2, the same year, orders were given to continue the employment of the plant belonging to Messrs. Muir Bros. & O'Sullivan, and the Sarnia Bay Towing & Salvage Co., to do the work required, at the rate of $12 per hour removing 800 cubic yards per day of 10 hours.

From July 1 to September 15, 1903, Muir Bros. & O'Sullivan's plant worked 548 hours and removed 38,950 cubic yards of material at a cost of $6,576.

From June 17, to November 14, the Sarnia Bay Towing & Salvage Co.'s plant worked 1,188 hours and removed 91,800 cubic yards of material at a cost of $14,256, and from May 23 to June 30, 1904, the Sarnia Bay Towing & Salvage Co.'s plant worked 336 hours, removing 29,160 cubic yards.

Expenditure for fiscal year 1903-04 :—

To paid, Muir Bros. & O'Sullivan	$6,576 00
" Sarnia Bay Towing & Salvage Co.	14,256 00
" inspection	751 10
	$21,583 10

PORT ARTHUR.

Port Arthur is situated on Thunder bay, Lake Superior, in Thunder Bay district. It is the terminal of the Canadian Northern Railway. Population about 2,000.

At the session of parliament of 1903, the sum of $17,500 was appropriated for repairs to the breakwater at this place, and on November 9, authority was given to proceed with the work by day labour.

In doing the above work, some 337,064 feet board measure, pine ; 11,674 pounds iron and 435 cords of stone were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 3,462 87
Material	10,539 77
	$14,002 64

PORT BURWELL.

Port Burwell is situated on the north shore of Lake Erie, in the county of Elgin. It is about 85 miles west from Port Colborne, at the Lake Erie entrance of the Welland canal, and 20 miles east of Port Stanley. This harbour is the terminus on Lake Erie of the Tilsonburg, Lake Erie and Pacific Railway, which extends inland as far as Ingersoll, where it connects with the Canadian Pacific Railway.

Previous to 1896, the harbour at Port Burwell was only a local harbour used by fishermen and small trading schooners. At that time, improvements on a large scale were commenced to enable the Tilsonburg, Lake Erie and Pacific Railway to deliver coal taken at United States posts on Lake Erie, to the industrial towns of centre Ontario, such as Ingersoll, Tilsonburg, Woodstock, Guelph, Brantford and others, and it was expected that 600,000 tons at least, would be imported that way annually at a saving of from 45 cents to 50 cents per ton to the consumers.

The harbour is situated at the mouth of Otter creek and is formed by two lines of works, running almost north and south ; the east line being 2,413 feet in length, the west line 2,855 feet in length, extending into Lake Erie, a distance of about 1,200 feet, the balance being along the banks of the creek.

Commencing out in the lake, the east line of works is composed of 550 feet of cribwork 30 feet in width, inclusive of a headblock or return to the east 50 by 24 feet; followed by a length of 700 feet of cribwork 20 feet in width ; then by 120 feet of cribwork 18 feet wide ; the whole of this cribwork being sunk in 22 feet of water at low water, and standing 6 feet above low water. Then follow 893 feet of piling ; the main piles being 35 feet in length, the anchor piles 25 feet in length, with two rows of sheet-piles, one inside the main piles 20 feet in length, the other, outside the main piles 22 feet in length. The main piles being driven to a depth of 29 feet below low water level, and the top of the work being 6 feet above low water level.

Next to this piling, there is a length of 150 feet of combined cribwork and piling, the cribwork being 12 feet in width and 6 feet in height, resting on piles cut off level with the water, these piles being 24 feet in length. These 150 feet of work were done during the fiscal year 1903-04.

On the west side, commencing also in Lake Erie, the line of works is composed of 975 feet of cribwork 20 feet in width, inclusive of a return to the west 50 feet by 30 feet forming the head block ; the cribs being in 22 feet of water, and the

top of the work standing 6 feet above low water ; then follow 220 feet of cribwork 18 feet in length, in 11 feet of water only, but with close piling in front 28 feet in length, with anchor rods passing through the cribs into anchor piles driven on the west side of the cribs, the height of the work being also 6 feet above low water level. Next, comes a length of 1,050 feet of piling similar to the one described for the east side ; then a length of 610 feet of combined piling and cribwork ; 480 feet of which were built in 1903-04.

The width of the channel at the entrance between the two headblocks is 155 feet, narrowing to 130 feet at a distance of 500 feet ; then widening to 200 feet at a further distance of 400 feet, narrowing again to 185 feet at a further distance of 240 feet, then widening to a width of 350 feet at a further distance of 450 feet, then narrowing again to a width of 170 feet at a furthur distance of 600 feet. At that point the harbour may be said to end, and the creek to commence.

The whole of the area between the two lines of works was dredged to a depth of 20 feet previous to 1904, but early in the spring of 1904, a very strong freshet in the creek caused a considerable amount of silting, and soundings taken in April, 1904, show that the average depth of the harbour at that time was only 14 feet, while in the very centre of the harbour, the minimum depth was 7 feet.

Before the harbour of Port Burwell can be utilized, for the purpose for which these consequent improvements have been made, the creek will have to be diverted to the westward of the harbour, a breakwater constructed on the west side, and the east pier lengthened.

During the fiscal year 1903-04, the following work was done in the harbour of Port Burwell :—

1. 280 feet of superstructure was built up at the outer end of the eastern jetty, from low water to a height of 6 feet above low water, the width being 24 feet.

The work is of cribwork well put together, fully ballasted and planked over with 3-inch planks.

2. The protection work at the inner end of the harbour on the west side, was extended a further distance of 480 feet in a northerly direction.

This work was done as follows :—

A front row of close piling was driven, the piles being 10 x 12 inches dimension, and 24 feet in length. Then 12 feet back, piles of the same length and dimensions were driven 4 feet apart. All these piles were cut level with low water and cribwork 12 feet in width, well filled with brush and stone was built upon top of the piling to a height of 5 feet above low water, and planked over with 3-inch plank.

3. The inner end of the protection work on the east side of the harbour was completed over a distance of 150 feet, by building cribwork 12 feet wide, on the top of the piling driven during the fiscal year 1902-03.

A considerable amount of dredging was done in the harbour during the year 1903-04 at a further additional cost of $31,243.15.

PORT COLBORNE.

At the close of the fiscal year 1902-03, the western breakwater under course of construction, at Port Colborne, Ontario, for the protection, against westerly storms, of the commercial docks built by the Department of Railways and Canals, was practically completed ; there remaining only two feet of superstructure to be built up on the inner 1,200 feet of the breakwater, and the placing of 1,400 cubic yards of large stones along the outer face of the structure. This work was satisfactorily completed in October, 1903, and the final estimate was given to the contractors on the 30th day of October, the total cost of the breakwater aggregating $511,000.

The structure as completed consists of : 1. A headblock, 100 feet in length and 60 feet in width, on which the Department of Marine and Fisheries have erected a

handsome lighthouse built entirely of concrete and iron. 2. Of 4,400 feet of cribwork ; the outer portion of which, 2,400 feet in length is 50 feet in width, and the remainder of it being in shallower water is only 25 feet in width.

During the autumn of 1903, the winter of 1903-04, and the spring of 1904, the timber superstructure was so severely tested by accumulations of ice, and by the force of the waves, it was decided to strengthen it very materially.

1. By building a concrete wall around the headblock, of an average thickness of 6 feet, and extending from a depth of 2 feet below low water to the top of the work, a height of 15 feet.

2. By substituting a concrete covering for the timber coveing originally specified, this covering varying in thickness from 1 to 1½ feet.

With this object in view, a contract was entered into with Mr. M. J. Hogan, as follows :—

1. For the concrete wall around the headblock, at the rate $7.50 per cubic yard of concrete in place.

2. For the concrete slope replacing the wooden steps forming the 'break,' and for the concrete covering on the outer portion of the structure at the rate of $8 per cubic yard of concrete in place.

3. For the concrete covering on the inner portion of the breakwater, at the rate of $7 per cubic yard of concrete in place.

In the three cases, the price included the removal of all timber and stone in the way of the concrete work.

This work was started on April 13, 1904, the date of the signature of the contract, and was very satisfactorily completed at the close of the fiscal year, at a cost of $38,075 divided as follows :

1. Concrete wall around headblock, 1,113 c. yds. at $7.50	$8,490 00
2. Concrete in slope and covering of outer portion of breakwater, 2,985 c. yds. at $8	23,880 00
3. Concrete on inner portion of breakwater, 815 c. yds. at $7	5,705 00
	$38,075 00

During the winter of 1903-04, it was also decided to increase the quantity of large stones along the outside face of the breakwater, and in consequence, an arrangement was made with Mr. Hogan for the placing of 10,000 cubic yards of these stones at the rate of $2.50 per cubic yard. This work was completed on June 30, the expenditure being $25,000. Some very large stones, varying in size from 2 to 6 cubic yards, were obtained from a quarry 18 miles distant from the work, these very large stones forming a total of over 5,000 cubic yards out of the 10,000 cubic yards placed. This rip-rap is a great protection to the structure, and should be continued.

During the fiscal year 1903-04, plans and specification for the construction of a second breakwater on the east side of the harbour were prepared, tenders were called for, and the contract awarded to the lowest tenderer, Mr. M. J. Hogan, for the sum of $179,000.

The contract was signed on June 8, 1904.

At the close of the fiscal year, no construction had been performed, but materials were being delivered.

The new or eastern breakwater is to be 600 feet to the eastward of the western breakwater. It will be 2,400 feet in length and 35 feet in width. The understructure to within 2 feet of ordinary low water mark being of timber cribwork, and the superstructure to a height of 11 feet above low water mark, being of concrete cribwork (Fraser's system).

The construction of this eastern breakwater will effectually protect the commercial docks from all easterly storms.

PORT ELGIN.

Port Elgin is in the electoral division of the southern portion of the county of Bruce, on the eastern shore of Lake Huron, about 24 miles north of Kincardine, and 4 miles south of Southampton. It is a station of the Wellington, Grey and Bruce division of the Grand Trunk Railway. There is no track from the railway to the harbour. Population, 2,000.

At the session of parliament of 1903, the sum of $4,000 was appropriated for dredging and repairs to the piers at this place, and on July 15, orders were issued to proceed with the work by day labour.

The work consisted in completing the filling with stone ballast of the extension to the breakwater, and repairing the landing pier superstructure, length of 200 feet, 20 feet wide.

In doing the above work, some 64,127 feet board measure, cedar; 2,000 feet board measure, rock elm; 110 cords stone and 900 lbs. iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$1,019 42
Materials	1,810 75
Dredging	1,100 00
	$5,930 17

PORT HOPE.

Port Hope is situated in the county of Durham, on the north shore of Lake Ontario, sixty-three miles east of Toronto, on the Grand Trunk Railway, and has a population of 4,188. The chief trade is in lumber and grain.

At the session of parliament of 1903, the sum of $7,500 was appropriated for repairs to piers and dredging at this place, and on August 5, authority was given to expend the sum of $5,000 in repairs to the piers. Work was commenced on June 23, 1904.

The work consisted in the rebuilding of 40 feet in length by 32 feet in width of the superstructure of the east pier, south of the lighthouse, 45 feet in length of same pier, south ends of the warehouse, and 180 feet in length of the centre pier repaired, on an average height of 4½ feet,with the other repairs that were found necessary.

In doing the above work, some 55,841 feet board measure pine, nine piles and 1,061 pounds iron were used.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$2,270 49
Materials	2,729 51
	$5,000 00

RIVIÈRE AUX PUCES.

Puce is a village on the south shore of Lake St. Clair, thirteen miles east of Windsor.

At the session of parliament of 1903, the sum of $1,800 was appropriated for the renewal of the sheet piling at this place, and authority was given on August 5, the same year to expend the amount by day labour. 250 lineal feet of work was renewed on the west side and 50 feet on the east side.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$ 599 63
Materials	985 07
	$1,584 70

ROBBIN'S LANDING.

Robbin's Landing is a small settlement on the south shore of Rice lake, nine miles east of Harwood, and twenty-three miles north-east of Cobourg.

Authority was given in June, 1904, to expend the sum of $70 in repairs to the wharf at this place, which had been damaged by an ice shove during the spring.

Expenditure for fiscal year 1903-04, $143.44.

RONDEAU.

Rondeau is situated in the county of Kent, at Pointe aux Pins, on the north shore of Lake Erie, about 140 miles west of Port Colborne, the Lake Erie entrance to the Welland canal. It is a harbour of refuge and a very important one on this side of the lake. Of late years the beach at Rondeau has become a much frequented summer resort, and many cottages have been erected. The Erie and Huron Railway have constructed their line this far, and have established a dock for lake ferry to deliver coal in cars from the other side.

At the session of parliament of 1903, the sum of $6,000 was appropriated for improvements to the piers at this place, consisting in the construction of sheet pile protection works to the west pier to prevent the sand silting through from the lake into the channel, the work to be done by day labour, as the amount was not sufficient an additional sum of $5,600 was authorized to be expended on the work.

In doing the above work, some 156,984 feet board measure, pine ; 56,669 feet board measure, oak and 21,611 pounds of iron were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$3,058 50
Materials	8,597 72
	$11,646 22

ROSEDALE.

Rosedale is a village in the county of Victoria, on the Rosedale river, 8 miles from Fenelon Falls.

At the session of parliament of 1903, the sum of $1,000 was appropriated for the construction of a wharf at this place, and on November 8, 1903, authority was given to do the work by day labour.

The work consists of a landing pier in the centre of the river, made up of two cribs with a span between, giving a total length of 50 feet by 16 feet in width ; a timber approach of cribs and spans 100 feet in length by 12 feet in width, and a road approach of 45 feet in length.

In doing the above work, some 10,782 feet board measure cedar ; 8,010 feet board measure pine ; 12,179 feet board measure hemlock and 1,274 pounds iron were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$357 76
Materials	627 88
	$985 64

ST. JOSEPH.

St. Joseph is situated on the east side of Lake Huron, in the county of Huron, about 14 miles south of Goderich. Population 500.

At the session of parliament of 1903, the sum of $4,000 was appropriated for completing the wharf at this place, and on May 30, 1904, the department accepted the offer of Mr. J. A. Corry to complete the structure for the sum of $3,975.

Expenditure for fiscal year 1903-04, $4,604.11.

SARNIA.

Sarnia, the county town of the county of Lambton is situated on the St. Clair river, six miles south from Lake Huron.

At the session of parliament of 1903, the sum of $6,000 was appropriated for dredging at this place, orders were given to employ the dredging plant of Mr. C. S. Boone, 'General Meade' to do the work required, to be paid for at the rate of $12 per hour, removing 800 cubic yards per day of ten hours.

Work was commenced on August 17, 1903, and completed on September 19, the same year, during which time the plant worked 346 hours and removed 30,704 cubic yards of material.

The dredging was performed in front of the Grand Trunk Railway wharf and the Lake Erie Ferry slip.

Expenditure for fiscal year, 1903-04 :—

To paid,	C. S. Boone, dredging	$4,152 00
"	C. S. Boone, towage	1,341 00
"	inspection	158 40
		$5,651 40

SAULT STE. MARIE.

Sault Ste. Marie is situated at the head of St. Mary's river, which connects Lake Superior with Lake Huron.

At the session of parliament of 1903, the sum of $18,300 was appropriated for harbour improvements at this place, and on April 12, 1904, the contract for the extension of the government wharf was let to Mr. Joseph Battle, for the sum of $65,000.

Some rock was blasted and removed, and dredging done in front of A. D. MacKay's wharf at this place, during July and August, 1903.

Total expenditure for fiscal year 1903-04, $13,669.42.

STURGEON FALLS.

Sturgeon Falls, a pos village in the district of Nipissing, Ont., is situated on the Sturgeon river and on the Canadian Pacific Railway.

The Sturgeon river is available for boats plying on Lake Nipissing.

During the fiscal year 1902-03, the sum of $500 was granted by parliament to be applied towards the construction of a wharf and approaches.

On January 23, 1903, a contract was let for the construction of a wharf at the foot of Wharf lane, for the sum of $2,810.

The wharf is 30 feet wide, has a frontage of 100 feet for a depth of 10 feet of water, together with an approach 20 feet wide and 40 feet long. The structure is built of four cribs united by platforms 6 feet above low water level.

Expenditure for fiscal year 1902-03, $506.54.

During the fiscal year 1903-04, an additional sum of $4,500 was granted by parliament.

The contract was completed in September, 1903.

A freight shed was added, and a suitable approach was built by grading and macadamizing Wharf lane, which is 200 feet in length and 33 feet in width. Repairs were also made to the approach, which sustained damages in the spring of 1904.

Expenditure for fiscal year 1903-04, $4,123.18.

Total expenditure to June 30, 1904, is $4,123.18.

SYDENHAM RIVER.

Sydenham river has its outlet in 'Chenal Ecarté' the passage between Ste. Anne island and the mainland. From its mouth to Wallaceburg, it is a large navigable stream, above this point it divides into two branches, north to Wilkesport 14 miles, and east past Dresden, 15 miles, and on these two branches small steam craft with scows are run, and booms of timber are rafted.

At the session of parliament of 1903, the sum of $5,800 was appropriated for improvements to the Sydenham river, and on July 24 the same year, authority was given to employ the plant of the Chatham Dredging Co., to remove the bar at the mouth of the Sydenham river (Chenal Ecarté), the terms being 13½ cents per cubic yard removed.

Work was commenced on August 26, and completed on November 3, 1903, during which time the plant removed 13,168 cubic yards of material at a cost of $1,777.67, and worked 139 hours removing obstructions, in the shape of sunken logs, snags, &c., for which payment was made at the rate of $8 per hour, 4,280 cubic yards of material were removed from the 'Chenal Ecarté' at 13½ cents per yard, also 39 hours dredging was done at Tupperville, at $8 per hour, 10 hours time was allowed for towage from Tupperville to Mitchell's bay at $4 per hour.

Expenditure for fiscal year 1903-04, $3,677.57.

THESSALON.

Thessalon is situated on the north side of the north channel of Lake Huron, in the district of Algoma, 50 miles east of Sault Ste. Marie. Considerable lumber is shipped from this place.

At the session of parliament of 1903, the sum of $5,000 was appropriated for the construction of a breakwater at this place, plans and specifications were prepared and tenders called for.

Some repairs to the wharf were authorized in March, and completed in May, 1904.

Expenditure for fiscal year 1903-04, $417.27.

THORNBURY.

Thornbury, an incorporated village in Grey county, is situated at the mouth of Beaver river, which empties into Georgian bay, on the Meaford branch of the Grand Trunk Railway, 8 miles from Meaford, and 19 miles from Collingwood. It contains four churches, twenty stores, two hotels, two grist, one saw, one woollen and one planing mill, two printing offices issuing weekly newspapers and telegraph and express offices. Population, 900.

At the session of parliament of 1903, the sum of $1,500 was appropriated for repairs to harbour works at this place, and on August 5, authority was given to expend the amount. The work consists in repairs to the landing pier, renewing much of the portion below low water, from the shore end out, some 400 feet in length.

Work was commenced on August 26, 1903, and continued up to December 29, when operations ceased for the winter months. Work was recommenced on May 7, 1904. In connection with the above work, some 15,750 feet board measure cedar; 900 feet board measure elm and 456 pounds iron were used.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$1,155 97
Materials	343 95
	$1,499 92

TOLSMAVILLE.

Tolsmaville is a village on the east shore of Cockburn island, Georgian bay, in Algoma district. Bruce Mines is the nearest railway point.

On July 18, 1903, instructions were given to repair the wharf at this place, and the sum of $400 was authorized for this purpose, to be charged to Harbours Generally.

The work consisted in replanking and renewing the floor stringers, the full length of the wharf, and in doing so, the following materials were used : 7,248 feet board measure cedar; 7,044 feet 3-inch cedar plank; 700 feet board measure oak, and 700 lbs. iron.

Expenditure for fiscal year 1903-04 :—

Labour and superintendence	$142 25
Materials	257 49
	$399 74

TORONTO.

Toronto harbour is situated on the north shore of Lake Ontario, and is formed by a circular bay 1½ miles in diameter, separated from the lake by a low island (formerly a peninsula) about 6 miles long, making a safe and well-sheltered harbour, for containing a large number of vessels.

At the session of parliament of 1903, the sum of $14,000 was appropriated for works at the eastern entrance, and authority was given on August 7 to apply the amount of the appropriation in constructing four groynes to prevent the erosion of the south shore of the island, and in making general repairs to the eastern piers, &c.

Four groynes were constructed on the south shore of the island, and repairs were made to the face timbers of the east pier, the decks of the east and west piers were also renewed.

Dredging was carried on for a period of 33 days, but, owing to heavy fall storms, the dredging was discontinued.

The following quantities of materials were used in the construction of groynes and repairs to piers, 70,340 feet board measure hemlock; 6,228 feet board measure pine, 4,343 white oak, 1,608 lineal feet of brush matting and 471 cubic yards of stone.

The sum of $20,000 was also appropriated for sheet piling a length of 1,000 feet on the channel side of the eastern pier, northwards from the lighthouse.

Up to June 30, 927 lineal feet of the pile work had been completed.

In doing the above work, the following quantities of materials were used : 265,707 feet board measure, southern pine; 79,330 feet board measure, white pine; 4,808 feet board measure, white oak, and 2,282 feet board measure, tamarack.

Expenditure for fiscal year 1903-04, $44,680.73.

VICTORIA HARBOUR.

Victoria Harbour is situated in the county of Simcoe, on Matchedash bay, ten miles west of Midland.

At the session of parliament of 1903, the sum of $8,000 was appropriated for dredging at this place, and on May 27, orders were given to employ the plant belonging to Mr. C. S. Boone, to do the work required, the terms being $12 per working hour, removing 80 cubic yards of material, or 800 cubic yards per day of ten hours. The plant was at work during 449¼ hours, removing 34,288 cubic yards.

Expenditure for fiscal year, 1903-04 :—

To paid, Mr. C. S. Boone, use of plant	$6,804 00
" inspection	160 10
	$6,964 10

WASHAGO.

Washago is a village in the county of Simcoe on the Severn river, and is distant thirteen miles north-east of Orillia.

At the session of parliament of 1903, the sum of $2,000 was appropriated for regulating the waters of Lakes Simcoe and Couchiching, repairs to works at Washago, &c.

This work was carried out in two sections, part of the work being done on the Severn river above the stop-log dam near Washago, consisting of blasting and cleaning out river bed of obstructions, and the other portion of the work consisted in removing by blasting, obstructions in Black river and Blind channel near Washago.

Expenditure for fiscal year, 1903-04 :—

Labour and superintendence	$1,670 64
Materials	256 31
	$1,926 95

WENDOVER.

Wendover, in the county of Prescott, is situated on the south shore of the River Ottawa, opposite North Nation Mills, a station of the Canadian Pacific Railway. The nearest railway station on the south shore is Plantagenet, distant about eight miles.

The construction of a wharf at this place was commenced in September, 1901. It consists of the following, viz. :—

(a.) A stone embankment 160 feet long from the shore, 18 feet wide at the top with slopes of 1 in 1 on the sides, and a height of 12 feet at the north end.

(b.) A trestle or pile approach 342 feet in length from the stone embankment to the head block, by a width of 18 feet, for 294 feet of its length, and a width of 60 feet for the remaining 48 feet adjacent to the headblock.

(c.) A headblock of pile-work laid at an angle of 82°, 30′ with the approach 71 feet in length, by a width of 32 feet, with a close-faced cribwork ice-breaker, 37 feet by 24 feet, at its up-stream end.

The wharf at its outer face has a height of 30 feet, stands in 10 feet at low water, and is three feet above the high water level.

During the fiscal year 1903-04, the sum of $1,097.48 was expended in completing the wharf at that place. The work consisted in re-enforcing the bracing of the

pile approach, lowering the top of the hill on the road leading to the wharf and completing the stone embankment.

The work was carried out by day labour. The total expenditure on that work is, $10,694.12.

WIARTON.

Wiarton is situated in the north riding of the county of Bruce, at the head of Colpoy's bay, about thirty-two miles north of Owen Sound. It is the terminus of the Georgian Bay and Lake Erie branch of the Grand Trunk Railway.

At the session of parliament of 1903, the sum $10,000 was appropriated for the construction of a wharf on the east side of the harbour at this place.

Plans and specifications were prepared, and tenders called for this work, but, owing to some difficulty in obtaining the right-of-way, the work has not been let.

PROVINCE OF MANITOBA.

FAIRFORD RIVER CANAL—LAKE MANITOBA OUTLET.

The work of procuring material and equipping a plant to do the work of cleaning out the bed of the Fairford river, at the foot of the Fairford River canal, was proceeded with.

This plant, which is the main item of cost for this work, is also intended to be used in connection with both the Mossy river and lowering Lake Dauphin, so that part of its cost was charged to the latter works. The clam shell that was taken out of Lake Manitoba in 1903, was cleaned up and put together again, placed upon a scow, and is in a condition to work. One of the difficulties to be overcome in connection with this work, is, that it is a long distance from the nearest centre of population, and the need of a staunch tug, to look after the dredge, was felt.

The expenditure incurred in connection with this work, during the fiscal year 1903-04, amounted to $2,243.59.

GIMLI, LAKE WINNIPEG.

Owing to the yearly damages caused by the waves to the rip-rap approach to this pier, piles were driven through the stone that remained of the old approach, on a length of 100 feet from the permanent work.

The pilework was capped, stringered and planked over, near the shore, a stone embankment was built on a length of 50 feet, together with minor repairs to the wharf.

The expenditure for the year 1903-04 was $1,111.83.

GULL HARBOUR.

It was found that the outer 60 feet or so of the Gull Harbour wharf had settled over 2 feet. The sum of $1,306.72 was expended during the fiscal year 1903-04 in rebuilding the wharf on that height and putting on a new floor.

HNAUSA, LAKE WINNIPEG.

The wharf at this place was the first constructed by the department on Lake Winnipeg. The cribwork, for a length of 300 feet, had deteriorated, sagged, and settled. This part was levelled and the flooring renewed, and a small cribwork pier was built

in the place of the old stone approach, a short stone embankment was made on shore, next to the new pier.

The expenditure during the fiscal year 1903-04, was $1,480.20.

ICELANDIC RIVER.

The site of the wharf at Icelandic river is 4 miles up the stream from Sandy bay. Only boats of moderate, 4½ feet, draft can go up this stream at present, on account of the bar at its mouth, although a depth of water varying from 10 to 15 feet is found in the river.

A pile wharf was commenced at this place during the fiscal year 1903-04, for which the sum of $844.04 was expended.

LOWERING LAKE DAUPHIN.

The work of equipping a plant to do the work of cleaning out the bed of the Mossy river, for the purpose of regulating the flow of Lake Dauphin, was proceeded with. Material has been ordered for the construction of a plant that would answer this purpose as well as the Winnipegosis and Fairford river works. The sum of $2,224.26, was expended during the last fiscal year in providing the material and labour required to equip the said plant.

SELKIRK WHARF.

An extension of 200 feet to this wharf was constructed during the fiscal year 1903-04. Part of the material for a further extension of 100 feet, was also ordered, but owing to the strong objections raised by the owner of the property that would adjoin this further work, it was not proceeded with.

The total cost of the extension and the material alluded to, aggregated $2,953.23.

The work consists in ordinary piling with anchor piles and sheet piling, filled in with loose stone. Grading and filling back of the wharf was also done.

The extension, as well as the old wharf, stood the enormous flood and ice shove of the spring of 1904 without damage.

The total length of the present wharf is 500 feet, and is a great accommodation for several boats which call here to unload lumber, cordwood, fish and general merchandise.

ST. ANDREW'S RAPIDS, LOCK AND DAM.

The actual work done on construction, by the contractors during the fiscal year 1903-04, has consisted of the removal of 1,330 cubic yards of rock from the site of the proposed lock. This was accomplished during the period extending from July 1, 1903, to September 12, 1903.

With the exception of a small quantity of trimming, the excavation for lock foundation is practically completed.

From September 30, 1903, to February 26, 1904, 3,800 cubic yards of stone for crib filling and for crushing were delivered on the site of the work. Of this quantity, 876 cubic yards have been rejected, as being too large to use for crib filling and too expensive to break with the crusher.

From February 26, 1904, to April 5, 1904, 504 cubic yards of sand for concrete were delivered on the site of the work.

The above comprises all the work accomplished during the year by the contractors for the lock and dam.

PROVINCE OF BRITISH COLUMBIA.

ANDERSON AND KENNEDY LAKES.

Anderson lake empties into Uchucklesit inlet in Barclay sound and Kennedy lake Clayoquet sound, near its head on the west coast of Vancouver island.

The work is for the purpose of improving the outlets of these lakes to salt water, giving access to boats, without the necessity of breaking bulk in the carriage of supplies, to the mining claims in course of development on both lakes, which, in number and importance, are almost identical. The work consists of the removal of rocks and boulders from the channels and a facing of cribwork on the land side for the purpose of tracking up boats and canoes during low tide. This work is now approaching completion and has been much appreciated by those concerned.

The expenditure for the year ending June 30, 1904, on the above work was as follows :—

Anderson Lake—		
Wages	$ 696 75	
Provisions	215 15	
Material	87 24	
		$ 999 14
Kennedy Lake—		
Wages	1,172 00	
Provisions	226 96	
Material	100 29	
		1,499 95
Total		$2,499 09
Appropriation		2,500 00
Balance		91

COLUMBIA RIVER, ABOVE GOLDEN.

The working season on this portion of the Columbia river is regulated by the annual rise of water, and is covered as a rule by the months of July, August and September. The spring months give but little time for work from the time the ice leaves the river until the spring rise, usually occuring early in May.

During the year 1903-04, the old dredge 'Muskrat' was able to do very good work in putting in a long wing dam at Horsethief creek, some 400 feet in length ; one below Little warehouse, a quarter of a mile below Horsethief creek bar ; and another across the head of Irvine's channel. The object of these wing dams is to confine the water, as much as practicable to one channel, and thus getting the benefit of the increased current consequent upon such contraction to scour out the bars. This method has been found both preferable to and more permanent than dredging. The dredge 'Muskrat' was worn out and practically useless in any case and had to be condemned. The result of the present method of improvement has been very satisfactory—there is a greater depth of water now on the different bars during extreme low water than ever before, and the river steamers run from the opening of navigation until closed by ice. These dams will in some cases require further extension to get the best results.

They are well and strongly built consisting of two rows of piles, 5 feet apart, driven from 7 to 8 feet centres, filled with brush and loaded with rock, making an effective and comparatively permanent dam.

NEW HULL.

In the month of April work was commenced on a new hull for tug boat, &c., to be used in connection with pile-driver and moving scows, &c., in the work of river improvement, the old dredge, as stated, being unsafe and condemned. The work of building the new hull was carried on continuously until completion at the end of June. It was found necessary to get the lumber, &c., from the coast, which was better and no more expensive than the local mills, which were, however, unable to fill the bill satisfactorily. Some delay was caused in consequence, but the boat was satisfactorily launched in the early part of July. Her length of hull is 80 feet, beam 20 feet, with 2 ft. guard rail. The lower deck is reserved almost entirely for working purposes and affords ample room for work benches, hoisting engines, fuel, &c. On the upper deck a house has been built with caboose, mess-room, staff quarters, room for conductor, and complete sleeping quarters for eight men. She has had two coats of paint inside and out and has been completed, exclusive of equipment, under the appropriation of $4,500.

WILMER CHANNEL.

This is a work that has been under consideration for some years past and was during the last fiscal year prosecuted under an appropriation of $1,000 granted for the purpose. The work was commenced on April 11, 1904, the object being to connect the river with a slough so as to give access to the foot hills, about half a mile distant from the river, during high water. The work has, however, been completed to the satisfaction thus far of the residents of Wilmer, and a channel 350 feet long, 50 feet wide, and from 2½ feet to 3 feet in depth has been excavated.

The following is the expenditure under the different heads comprising the above service for the fiscal year 1903-1904:—

Columbia River above Golden:—		
Wages	$1,552 97	
Provisions	231 60	
Material	571 24	
Fuel	132 25	
Transportation	203 60	
Rent	96 00	
		$2,787 66
New Hull:—		
Material	$2,163 50	
Wages	2,571 23	
Transportation	55 90	
		4,790 63
Wilmer Channel:—		
Material	$ 140 00	
Wages	732 40	
Freight	42 00	
		914 40
Total		$8,492 69

COLUMBIA RIVER, BELOW GOLDEN.

The bulk of the expenditure for this work was made during the month of October and the first week in November, 1903, in putting in a wing dam at the head of Kitchen's rapids, four miles above Beaver, extending from the east or right bank of the river almost entirely across the Columbia, to prevent the logs from piling up, as heretofore, on the reef or bar extending across the entire river and causing the rapids. This improvement was made at the request of the Columbia River Lumber Company, the dam has quite fulfilled all that was expected from it. Owing to a somewhat early rise, on November 7, it was not possible to complete this work until the low water in April and May of 1904. The dam is a crib of round logs, put together with close cross ties and drift bolts, well filled and weighted with boulders and quarried rock, and has already been fairly well tested by the high water. A small boom was also put in across an outlet leading out of Aylmer channel. This work was done by the Columbia River Lumber Company, and is sufficiently strong to answer the purpose intended.

The expenditure for the year 1903-04 was as follows :—

Wages	2,329 22
Provisions	437 71
Material	2,022 87
Transportation	135 07
Total	$4,924 87

COLUMBIA RIVER, ABOVE REVELSTOKE.

This work is a continuation of the improvement of this portion of the Columbia river, extending from the city of Revelstoke to the present head of navigation at Downey creek, 10 miles below the foot of the 'Dalles des Morts,' or Death's rapids, a distance of 40 miles. It is an exceptionally difficult stretch of water to navigate under any circumstances, and the work has thus far been directed to the removal of the worst points of rock and reefs and the many boulders obstructing the channel, forming a serious menace to the safety of the steamer 'City of Revelstoke,' running on this route. The work done has been of very great benefit to navigation, but, in common with all works of this nature, the removal of one difficulty sometimes develops another, so that the general work of improvement must be taken in detail and carefully considered before being commenced to prevent increasing instead of lessening the difficulty.

The expenditure for the fiscal year 1903-04 was as follows :—

Wages	$3,729 51
Provisions	642 12
Material (explosives, &c.)	1,513 64

COLUMBIA RIVER, BETWEEN ARROW LAKES.

This service, representing the work of the dredge 'Nakusp.' After a thorough examination and test of this new dredge, it was found necessary to make alterations in the machinery which were not completed until February, 1904, since which time, or the opening of navigation, the dredge has done good work in front of the Canadian Pacific Railway at Arrowhead and Robson, and elsewhere.

The expenditure for the fiscal year 1903-04 was as follows :—

Wages	$5,775 35
Provisions	2,120 78
Material	2,936 96
Fuel	400 70
Scow hire	459 00
Transportation	83 94
Contingencies	6 85
Total	$11,783 58

DUNCAN RIVER.

The usual work of clearing the banks of leaning trees and brush projecting over the channel and removing snags and stumps deposited by erosion constitutes the operations in connection with the above service in the spring of 1904 during the lowest stage of water obtainable. This work is of annual recurrence and will continue until the river has settled into a defined direction.

The expenditure for the fiscal year 1903-04, was as follows :—

Wages	$1,503 00
Provisions	382 90
Transportation	107 25
Total	$1,993 15

FRASER RIVER.

During the fiscal year 1903-04 some much needed repairs were made to the protection works at Point Garry at the mouth of the river, and repairs and an extension to the dam on Sand Heads, a mile below Point Garry, to check the threatened diversion of the channel to the north. In the former case twenty-two mattrasses, 26 by 60 feet and 2½ feet thick, covering a length of 600 feet, were sunk in position and 2,150 tons of rock used on new mattrasses and in strengthening weak points. In the latter case, the upper end of dam was extended some 220 feet sinking eight mattrasses 26 by 80 feet, 2½ feet thick, and two mattrasses, at the lower end, of the same dimensions, 26 x 80 x 2½ feet, the shore connections were strengthened. Three hundred tons of rock were used in loading these mattrasses and 7,000 tons were used in raising the height of the dam and filling in gaps which had been out between the original mattrasses, in some cases to a depth of 15 feet. The length of dam is 3,500 feet and its stability is of vital importance to the maintenance of the present channel through the Sand Heads.

In addition to the above expenditure, one month's work of the dredge 'King Edward' and snag boat 'Samson' was charged to this service. Two new scows were also built.

The expenditure for the fiscal year 1903-04 was as follows:—

River Improvement :—		
Wages	$11,218 61	
Provisions	2,165 81	
Material	4,261 96	
Tug hire	3,685 75	
Scow hire	928 00	
Tide gauges	501 70	
Superintendence	1.638 20	
Boiler for pile-driver	616 18	
New scows	5,131 41	
Repairing dyke	66 00	
Contingencies	20 70	
		$30,234 32
Dredge King Edward :—		
Wages	$ 1,092 00	
Provisions	446 94	
Material	109 30	
Tug hire	628 33	
Fuel	682 00	
Contingencies	6 45	
		2,965 02
Snag Boat Samson :—		
Wages	$ 625 00	
Provisions	225 97	
Material	103 68	
Water	10 67	
Contingencies	2 40	
		967 72
Total		$34,167 06

QUATSINO.

Quatsino Sound is the most northerly harbour on the west coast of Vancouver island, and is directly west of Hardy bay, which is, correspondingly, the most northern harbour on the east coast. The two are connected by a fairly passable trail and are distant 11½ miles. In the immediate vicinity of Quatsino wharf there is a saw-mill, an Indian village and trading post, and the Yreka mines, with which considerable traffic is done. During the fiscal year, a wharf was built at this place to enable the regular bi-monthly steamer to discharge freight and mails. The wharf is a substantial structure, extending out to deep water by an approach 250 feet in length with a T of 100 by 40 feet, and a small warehouse for storage purposes was built thereon.

The expenditure was as follows :—

Wages	$1,852 71
Provisions	601 26
Material	2,015 88
Engine hire	502 50
Contingencies	19 35
Total	$4,991 70

SIDNEY BREAKWATER.

The exposed position and broken weather delayed the commencement of this work until March 1 last, since which time the work has been steadily continued to the end of the fiscal year. The work consists of a pile protection extending from the shore at Sidney, some 1,000 feet, to give a sheltered area and protect the wharf now used by the Victoria Terminal Railway and Ferry.

The expenditure has been as follows :—

Wages	$3,431 79
Material	3,548 72
Tug hire	519 00
Fuel	65 00
Team hire	171 00
Contingencies	3 85
Total	$7,739 36

SKEENA RIVER.

The expenditure on the Skeena river for the year 1903-04 has been exclusively confined to snagging at the mouth and on the upper reaches of the river, or to the head of tide water, some thirty miles, and to the necessary repairs to the snag scow, which has neither the power nor size to cope with the large snags and constantly increasing demands by the fishermen for the removal of these obstacles to fishing. The balance remaining at the conclusion of the fishing season in August, 1903, of some $2,882.50, did not admit of attempting the removal of boulders, &c., on the upper river between Kitsilas canyon and Hazleton, at the forks, a distance of 80 miles—which is still required—but was devoted to repairs and renewed work of snagging, beginning on April 11, 1904, and carried on continually to the end of the fiscal year, June 30, 1904. The work is reported as being fairly satisfactory, the limited powers of our snag scow considered. There are still many large snags in deep water which it is not possible to raise or dispose of with the present appliances, and which should be removed. Consequently the want of a powerful snag boat is badly felt.

In a short time the fishing industry on the Skeena will possibly be double its present extent. There are at present some thirteen canneries tributary to this service, averaging in good years 250,000 cases annually. They have now in use over 11,000 nets, of 200 fathoms in length each, and valued at $150 each. They claim that the damage done annually to their nets by snags amounts to one-third of their value, which as can be seen, entails a very serious loss to the cannerymen, who furnish the entire outfit of boats and nets to the fishermen. These nets are also being made deeper than formerly, with the result that there is a greater development of snags and consequent demand for their removal. These considerations all point to the importance of an improvement in the appliances for the removal of this source of trouble.

The expenditure in connection with the above service for the year 1903-04, is as follows :—

Wages	$2,904 51
Provisions	715 24
Material	681 46
Fuel	603 50
Tug hire	45 00
Total	$4,949 71

SPALLUMCHEEN RIVER.

The work on this river consisted in the protection of the bank of the Spallumcheen river at the town of Enderby on the property of the Columbia Flouring Mills Co. The river was making serious inroads in this property immediately in front of the company's mills and offices, and it was upon their application that the work was carried out. There was some imperfect protection done by the Mill Co., but it has, in a great measure, disappeared. The work done by the government consists of a protection wall about 300 feet in length built by driving piles at 5 feet centres along low water line which are faced with 2 x 8 inch planks laid 4 inches apart to a height of about ten feet and then backed with brush loaded with rock. From the front row of piles at water line there are ties to a second row driven well in shore.

The expenditure for the fiscal year 1903-04 was as follows :—

Wages	$ 816 75
Material	671 81
Contingencies	1 60
Total	$1,490 16

THOMPSON RIVER.

The work consists in an improvement in the navigation of the North Thompson river, which it was decided to do by means of wing dams to contract the channel and get the consequent scour and deepening of the bars where most necessary. It was not possible to complete the dam during the fiscal year owing to the sudden and unexpected rise in the river.

The expenditure for the fiscal year 1903-04 was as follows :—

Wages	$1,555 40
Provisions	645 94
Material	635 96
Team hire	231 50
Hoisting engine	1,677 10
Total	$4,746 10

VICTORIA HARBOUR.

The dredge 'King Edward' worked from July 1 to November 21, 1903, for filling in the James bay flats in rear of the retaining wall and the site of the proposed new Canadian Pacific Hotel now definitely settled to be located on this property, the work was not completed. The cost of the services of the 'King Edward,' although she did not exceed the time anticipated, were enhanced by the necessity of charging repairs to this service instead of to that of dredge repairs, which was exhausted.

The dipper dredge 'Mud Lark' was engaged in deepening the entrance channel from the outer wharf to the inner harbour to a depth of 17 feet at extreme low tide. The material is very hard and the dredge very shaky.

The construction of the Marine Railway, capable of accommodating vessels of 3,000 tons, at the head of the Inner harbour, now nearing completion by the Victoria machinery depot, will necessitate further dredging in that direction. This work can be done by the 'Mud Lark' upon the completion of her present work. While capable of doing this harbour work, she is unfit to move to other distant points involving crossing or navigating the Gulf of Georgia.

The expenditure for the fiscal year 1903-04, was as follows :—

Dredge King Edward—

Wages	$5,889 29	
Provisions	1,594 95	
Material	901 10	
Water	9 25	
Coal	3,753 99	
Tug hire	129 50	
Contingencies	58 36	
		$12,336 44

Dredge Mud Lark—

Wages	$5,546 53	
Provisions	1,946 01	
Material	2,653 78	
Fuel	2,415 50	
Water	58 78	
Contingencies	17 58	
		12,638 18
Total		$24,974 62
Appropriation		25,000 00
Balance		25 38

WILLIAM'S HEAD QUARANTINE STATION.

The work in connection with this quarantine station in the fiscal year 1903-04, has been more than usually heavy and much needed work has been done.

The works were commenced on April 6 last and were carried on continuously until the end of the fiscal year. The work consisted of replacing the pipe line over the small ravines by new trestle work and new 4-inch cast iron pipe—some 500 feet in length ; gravelling and completing the road connecting the station with the main Metchosin road, some 2½ miles, the only means of access, other than by water, from the city of Victoria to the station and over which supplies, &c., are delivered during quarantine; and the completion of an entirely new road and tramway connecting the disinfecting station with the central and western approaches to the wharf. A large number of new drives, well gravelled and graded, have been opened through the grounds much to their advantage, both in appearance and convenience.

The water service will require further attention as the original pipes are far gone with erosion and perforation but are being gradually replaced with new cast-iron pipes; the grounds and general efficiency of the station have never been in as good a shape as at present.

The expenditure for the fiscal year was as follows:—

Wages	$ 6,132 15
Team hire	979 31
Material	3,857 59
Contingencies	4 00
Total	$10,973 05

DREDGING OPERATIONS.

During the fiscal year 1903-04, dredging was done at the following places :—

PROVINCE OF NOVA SCOTIA.

Acadia Coal Company piers, Pictou county.
Barrington channel, Shelburne county.
Burnham & Morrell wharf, Pictou county.
Eastern harbour, Cheticamp channel, Inverness county.
Hogg, Craig & Co., wharf, Pictou.
Intercolonial Railway, Pictou landing wharf, Pictou county.
Intercolonial Mining Company piers—Skinner's Point, Pictou county.
Liverpool Bar and channel, Queen's county.
Mabou channel, Inverness county.
Main channel to Market wharf, Pictou county.
Marine slip and wharf, Yarmouth county.
Market wharf, Pictou county.
Pictou Bar, channel, Pictou county.
Port Hood Coal Company wharf, Inverness county.
Steamboat wharf and channel, Yarmouth county.

PROVINCE OF PRINCE EDWARD ISLAND.

Halliday's wharf, Belfast, Queen's county.
Morrell channel, King's county.
Vernon River bridge, pier and channel, Queen's county.

PROVINCE OF NEW BRUNSWICK.

Caraquet, foundation new pier and old wharf, Gloucester county.
Gagetown wharf and channel, Queen's county.
Grand lake, Channel Jemseg into Grand lake, Queen's county.
Intercolonial Railway, N.R.C., St. John city and county.
Neguac, Northumberland county.
Oromocto shoals channel, Sunbury county.
Point du Chene wharf and channel, Westmorland county.
Queen's Coal Company bar and basin, Queen's county.
Richibucto Bar, Kent county.
Russel Bar, York county.
Winter port berths for ocean steamers, St. John city and county.

DREDGING OPERATIONS.

PROVINCE OF NOVA SCOTIA.

DREDGING AT ACADIA COAL PIERS, PICTOU LANDING, PICTOU COUNTY.

Pictou Harbour, Pictou county, is the finest on the southern shore of the Gulf of St. Lawrence, eastward of Gaspé. The valuable coal mines and stone quarries in the vicinity, and the finely settled and fertile country enhances its importance.

On the north shore of the harbour along the declivity of a ridge, the town of Pictou is situated, opposite which the harbour expands into three large arms, and at the head of these are East, Middle and West rivers. Pictou is the eastern terminus of a branch of the Intercolonial and of the Oxford and Pictou branch, and is 113 miles north-east of Halifax. It is well built, having many good stores, several hotels, branch banks, factories, saw-mills, iron foundry and machine shops, lumber yards, marble works, stone quarries and other industries. Here are also an academy, library Masonic hall, several churches, &c. The town has a population of about 3,235, and an extensive trade. The annual exports of coal are very large. The Prince Edward Island Navigation Company make Pictou a terminus for their steamers, and it is a place of call for other lines. Pictou has a marine slip, with two cradles capable of hauling large vessels with skilled labour for repairs, &c. The dredging done by the department at Pictou was at several localities in the harbour to facilitate shipping, &c., improving the approaches to the wharfs, and deepening at and around them for berths.

During the fiscal year 1903-04, the dredge 'Cape Breton' was engaged improving the depth of water at the new loading piers of the Acadia Coal Company, Pictou Landing, from May 25 to June 3, removing 8,400 cubic yards of mud, sand and gravel, at a cost of 10·84 cents per cubic yard. At Burnham & Morrill's wharf, on June 15 and 16, removing 1,050 cubic yards of mud, at a cost of 20·11 cents per cubic yard. At Hogg, Craig & Co., wharf, and to Main channel, June 4 to 14, removing 6,090 cubic yards mud, at a cost of 19·77 cents per cubic yard. At the Market or Harbour Commissioners wharf, June 23 to 30, removing 4,830 cubic yards mud, at a cost of 16·47 cents per cubic yard. At Intercolonial Railway wharfs at Pictou Landing, June 17 to 22, removing 3,395 cubic yards sand and gravel, at a cost of 16·90 cents per cubic yard. The Intercolonial Mining Company's loading piers, at Skinner's Point, on the East river, was further improved by the dredge 'St. Lawrence,' from May 17 to June 2. and June 8 to 10, removing 7,700 cubic yards of mud, &c., at a cost of 20·52 cents per cubic yard. This dredge was also engaged from June 3 to 7, and June 11 to 24, in improving the channel leading from the Main channel to the Market or Harbour Commissioners wharf, removing 9,100 cubic yards of mud, at a cost of 14·27 cents per cubic yard, and at the entrance to the harbour on Pictou Bar, from June 25 to 30, removing 1,750 cubic yards of sand and gravel, at a cost of 19·72 cents per cubic yard, improving the channel to 19 feet, and this work was in progress at the close of the fiscal year.

DREDGING AT BARRINGTON PASSAGE.

A seaport town of Shelburne county, four miles west of Barrington Head, and 165 miles south-west of Halifax. The population is engaged in fishing and farming. There were no wharfs in the district having a depth of water at their outer ends, cap-

able of floating vessels at low water, and the bottom is of such a nature that it was not thought desirable to attempt dredging for the purpose. After an examination of the locality, it was decided to improve Sherrow's channel, a mile to the east of Robertson's wharf, and in 1888-89 the dredge 'Canada' was employed to improve the channel removing 11,745 cubic yards. In 1889-90, the work was continued by improving the channel from its mouth to where the present public wharf or pier now stands, to a depth of 11 feet, by dredging a basin to enable vessels to lie afloat at low water, when the further quantity of 8,464 cubic yards was removed. In 1891-92 the wharf or pier being completed the dredge 'St. Lawrence' improved the basin to a depth 13 feet at low water, removing 4,375 cubic yards. In 1897-98 the dredge 'Canada' removed 12,780 cubic yards, further improving the channel; and again in 1898-99 removing 12,510 cubic yards. In the fiscal year 1903-04, the dredge 'Canada' operated there, removing 19,440 cubic yards of mud, from September 1 to December 15, at a cost of 44·92 cents per cubic yard, and the work is being continued.

DREDGING AT CHETICAMP, EASTERN HARBOUR.

The dredge 'Geo. McKenzie' continued improving the channel at this place from October 2 to November 27, 1903, and May 25 to June 30, 1904, removing 10,775 cubic yards sand and gravel, at a cost of 60 65 cents per cubic yard, the work was still in progress at the close of the fiscal year 1903-04.

DREDGING AT LIVERPOOL BAR AND CHANNEL.

The dredge 'Canada,' at the close of last fiscal year, 1902-03, was engaged improving the depth of water over the bar and in the channel at Liverpool, and continued the same from July 1 to August 31, 1903, removing 11,610 cubic yards of sand and mud, at a cost of 42·56 cents per cubic yard, when the work was completed.

DREDGING AT MABOU.

The dredge 'Geo. McKenzie,' was engaged improving the channel to a depth of ten feet from July 1 to August 24, removing 5,405 cubic yards sand and gravel, at a cost of 71·05 cents per cubic yard.

DREDGING AT PORT HOOD.

The dredge 'George McKenzie' operated at the Port Hood Coal Company's loading piers, at the public wharf, and at Smith's wharf at this place, from August 25 to October 1, 1903, improving the depth of water by removing 2,970 cubic yards sand, gravel and mud, at a cost of 69·94 cents per cubic yard.

DREDGING AT YARMOUTH.

The dredge 'Canada' operated in Yarmouth harbour, at the marine slip and steam boat wharf or channel, alternately, as the tides answered, removing 720 cubic yards at the steamboat wharf, and 1,440 cubic yards at the marine slip, at a cost of 51·97 cents per cubic yard.

PROVINCE OF PRINCE EDWARD ISLAND.

DREDGING AT HALLIDAY'S WHARF, BELFAST, QUEEN'S COUNTY.

The dredge 'Prince Edward' was operating here at the close of last fiscal year, 1902-03, and continued the work from July 1 to August 13, 1903, removing the further quantity of 13,365 cubic yards of mud and sand, at a cost of 22 03 cents per cubic yard, and completing the depth to eight feet at low water.

DREDGING AT MORELL, KING'S COUNTY.

The dredge 'Prince Edward' operated here from September 11 to November 27, 1903, and from May 14 to June 30, 1904, cutting a channel 8 feet in depth, 60 feet in width, through the Morell bar, removing 28,755 cubic yards earth, sand, mud, clay and stone, at a cost of 30·82 cents per cubic yard; the work was being prosecuted at the close of the fiscal year 1903-04.

DREDGING AT VERNON RIVER BRIDGE, QUEEN'S COUNTY.

The dredge 'Prince Edward' was employed here from August 14 to September 10, 1903, removing 7,380 cubic yards of sand and mud, improving the depth of water in the channel and at the public wharf there, at a cost of 26·63 cents per cubic yard.

PROVINCE OF NEW BRUNSWICK.

DREDGING AT CARAQUET, GLOUCESTER COUNTY.

Caraquet, a port of entry in Gloucester county, on Caraquet bay, and an inlet of the Baie des Chaleurs, 48 miles E.N.E. of Bathurst. It is an important fishing station. There is a lighthouse on Caraquet island, at the entrance to the harbour. Population about 4,074. A contract for the construction of a new wharf was awarded, and the dredge 'Cape Breton' was engaged from July 18 to September 15, 1903, preparing the foundation, at a depth of 22 feet, for the cribs, and removing 16,485 cubic yards of sand, at a cost of 38·29 cents per cubic yard. The work was completed.

DREDGING AT GAGETOWN, QUEEN'S COUNTY.

The dredge 'New Brunswick' operated here, from August 6 to 16, 1903, widening and deepening the old dugway, and from November 6 to 14, the same year, in the creek and at the wharf, deepening and improving the channel by the removal of 6,870 cubic yards of clay, mud and silt, at a cost of 15·96 per cubic yard. The dredge 'New Dominion' also worked here from November 3 to 6, 1903, improving the lower entrance to the creek, by removing 5,475 cubic yards of mud, at a cost of 12·34 cents per cubic yard, and completing that portion of the work.

DREDGING AT GRAND LAKE FLATS, QUEEN'S COUNTY.

The dredge 'New Dominion' was engaged dredging here from July 1 to September 6, and September 20 to October 16, 1903, removing 48,625 cubic yards of mud, and completing the channel 8,875 feet in length, 75 feet wide and 10 feet deep, from the head of the Jemseg river into the Grand Lake.

DREDGING AT THE INTERCOLONIAL RAILWAY, ST. JOHN CITY.

The dredge 'New Dominion' was employed here from April 13 to May 12, 1904, opening a channel fifty feet wide, seven feet deep at low water, 150 feet in length to the end of the old Intercolonial Railway wharf, removing 9,650 cubic yards of mud, at a cost of 22·81 cents per cubic yard; also driving nine piles for securing vessels to.

DREDGING AT NEGUAC, NORTHUMBERLAND COUNTY.

The dredge 'Cape Breton' was engaged here from September 16 to November 2, 1903, opening a channel to the public wharf at Neguac, where part of the bottom is rock, and resulted in breaking the dredge machinery, after removing 6,300 cubic yards, at a cost of $1.10·63 per cubic yard, when the dredging closed for the season.

The Fowlie dredge was engaged, from June 7 to July 4, 1904, in cleaning up the coaming left by the 'Cape Breton,' and dredging a channel farther along the side of wharf, 1,205 cubic yards stone, mud and gravel were removed, at a cost of $1.56⅔ cents per cubic yard, leaving the work to be completed.

DREDGING AT OROMOCTO SHOALS, SUNBURY COUNTY.

The dredge 'New Brunswick' was engaged improving the Oromocto Shoals, from August 17 to November 5, 1903, removing 44,360 cubic yards sand and increasing the depth of water to 11 feet, through a narrow channel, at a cost of 10·31 cents per cubic yard.

DREDGING AT POINT DUCHENE, WESTMORLAND COUNTY.

As stated in my report of last year, Point Duchene is situated on Northumberland strait and is the north-east terminus of the Shediac branch of the Intercolonial Railway, 2 miles from Shediac. It has long piers for shipping, and range lights on Shediac island (at the entrance) and on the pier-head.

The Prince Edward Island Steam Navigation Company steamers run every day between this port and Summerside, Prince Edward Island, while navigation is open, and connects with the trains. It contains several stores, two or three hotels, telegraph and express offices, &c., and a population of about 250. Here is Shediac harbour, the easiest of access and egress on this part of the coast. It is superior to Buctouche and Cocagne in the depth over the bar, and more extensive than the latter. The space for mooring shipping with 12 to 17 feet low water, being three-quarters of a mile in length, and from two to three cables wide, and is a secure harbour. The country about Shediac is fertile and well settled. The improvement of the channel from Chene Spit to and along the piers by dredging has occupied the attention of the department for several years. In 1874-75, the 'Canada' worked here: also in 1882-83 and 1883-84, and in 1890-91, the dredge 'St. Lawrence' giving a total amount excavated to that date, of 69,700 cubic yards, at a cost of $21,125.92. A depth of 15 feet at low water spring tides was made. Spring tides rise 2 feet, neaps 2 feet. The dredge 'Cape Breton' was engaged here from November 1 to 30, 1902, and May 11 to June 30, 1903, in completing a 15 foot channel, one hundred feet wide at low water, from the line of the range lights on Shediac island, to the outer end of the

public wharf, and a basin in front of the wharf to 19 feet, 360 feet in length, 140 feet wide, removing 40,110 cubic yards, at a cost of $4,915.80 or 12·25 cents per yard, and was still prosecuting the work at the close of the fiscal year 1902-03.

From July 1 to 17, 1903 the dredge 'Cape Breton' continued the work to its completion, removing 8,295 cubic yards sand and mud, at a cost of 20·55 cents per cubic yard.

DREDGING AT QUEEN'S COAL COMPANY, QUEEN'S COUNTY.

The dredge 'New Dominion' operated here from September 7 to 19, and October 17 to November 2, 1903, opening a channel through a bar and forming a basin at Newcastle to enable Messrs. J. S. Gibbon, to ship coal from their mines at that place, removing 14,475 cubic yards at a cost of 9·22 cents per cubic yard.

DREDGING AT RICHIBUCTO BAR, KENT COUNTY.

The dredge 'St. Lawrence' operated here from July 7 to November 16, 1903, improving the Richibucto bar by cutting a channel 100 feet wide to a depth of 15 feet through the reef and Jib Sheet shoals, removing 35,550 cubic yards of sand, at a cost of 29·31 cents per cubic yard, and completing the channel through.

DREDGING AT SPRINGHILL, RUSSELL BAR, YORK COUNTY.

The dredge 'New Brunswick' continued the dredging here, from July 1 until August 5, 1903, improving the inland navigation at the Russell and Chapel bars, removing 5,560 cubic yards of gravel and sand, at a cost of 28·51 cents per cubic yard.

DREDGING AT WINTER PORT BERTHS, ST. JOHN CITY AND COUNTY.

The dredge 'New Dominion' operated at the winter port berths, St. John harbour, when tides and weather would permit, from January 28 to April 12, and from May 13 to June 30, 1904, removing 32,950 cubic yards of mud, at a cost of 19·27 cents per cubic yard, and was continuing the work vigorously when the fiscal year closed.

The dredge 'New Brunswick' also operated here, from February 18 to June 30, 1904, removing 21,130 cubic yards of mud, at a cost of 28·11 cents per cubic yard, when the dredge was withdrawn, and sent to the Washademoak lake, for work at that place.

MARITIME PROVINCES DREDGES.

The Dredge 'St. Lawrence.'

At the beginning of the fiscal year 1903-04, the dredge 'St. Lawrence' was at Pictou, N.S., waiting orders. It proceeded to Richibucto, where it began operations on the bar at the entrance to the harbour of Richibucto, in Kent county, N.B., on July 7, and continued until November 16, opening a channel 100 feet wide, 15 feet deep, through the Reef and Jib Sheet shoal. The above work being completed and the weather stormy, the dredge was ordered to Pictou, where it went into winter quarters on the marine slip, and during the winter had necessary repairs and renewals made to the hull, boiler, engines and dredging machinery; the hull was cleaned and painted, and was ready to launch when the ice in the harbour permitted. On receipt of orders the crew were shipped and dredging commenced at the Intercolonial Coal Mining Company's pier, at Skinner's or Abercrombie point, on the East river, Pictou

county, where it was engaged from May 17 to June 2, and again from June 8 to 10, and 3 to 7, 1904, and from June 11 to 24, was engaged improving the channel from the main channel into the Harbour Commissioners' wharf, known as the Market wharf, and from June 25 to 30, 1904, it was engaged improving the bar at the entrance to Pictou harbour, to 19 feet at low water spring tides, vigorously pushing the work at the close of the fiscal year.

The Dredge 'Canada.'

At the beginning of the fiscal year 1903-04, the dredge 'Canada' was operating on the bar and channel at Liverpool, Queen's county, N.S., where it continued until August 31, completing the channel through the bar, and the harbour to 13 feet at low water spring tides. From September 1 to December 15, the dredge was engaged at Barrington, Shelburne county, N.S., deepening and improving the Sherrow channel to 12 feet. At the latter date, under orders, it proceeded to Yarmouth, to winter and repair. During the winter and early spring, the necessary extensive repairs were made on the marine slip, hull painted, dredge launched, crew shipped, and alternately, as the tide answered, the dredge operated at the marine slip, and in the channel, in front of the steamboat wharfs, in Yarmouth, from June 17 to 30, 1904, when it was under orders to return to Barrington to resume work there.

The Dredge 'New Dominion.'

At the commencement of the fiscal year 1903-04, this dredge was operating on the Grand Lake Flats, Queen's county, N.B., and continued there until September 6, 1903, when under orders it was removed to Newcastle, Queen's county, and dredged a channel through a bar for the Queen's Coal Company until September 19, when it returned to the Grand Lake Flats and resumed work there, and by October 16 it completed the channel 8,875 feet in length, 75 feet wide, 10 feet deep, from the head of the Jemseg river, into deep water, in the Grand lake. The dredge was ordered to return to Newcastle to dredge a basin for the Queen's Coal Company, which was done, and by November 2, the channel through the sand bar and a basin inside, were completed, enabling vessels to ship coal. The dredge was now ordered to Gagetown, where it was employed from November 3 to 6, removing a point at the entrance to the Gagetown creek. This work being completed and the weather bad, the dredge was ordered to St. John for winter quarters. Repairs to mud scows were immediately commenced and completed January 28, 1904, when the dredge was ordered to work at the winter port wharfs, for the city of St. John. The dredge and plant were immediately made ready, and the work continued from January 28 to June 30, except when employed from April 13 to May 12, dredging a basin in front of the Intercolonial Railway wharf at York Point.

The Dredge 'Prince Edward.'

On July 1, 1903-04, this dredge was operating at Halliday's wharf, Belfast, Queen's county, Prince Edward Island, and continued there until August 13, when work was completed and the dredge removed to the Vernon river bridge, where it worked from August 14 until September 10, improving the channel and berths at the wharf, when the dredge removed to Morrell, St. Peter's bay, Kings county, Prince Edward Island, where it operated from September 11 to November 27, opening a channel through the bar. At the last mentioned date the weather being bad and ice making, a basin was prepared at the public wharf, at the head of St. Peter's bay, and the dredge and scows placed in winter quarters there. During the winter and spring, the necessary repairs were made to dredge, hull and machinery, and scows by May 13, when dredging was resumed at Morrell, and was being vigorously prosecuted at the close of fiscal year 1903-04.

The Dredge 'George McKenzie.'

At the beginning of the fiscal year 1903-04, this dredge was operating at Mabou, Inverness county, N.S., improving the channel at that place to ten feet at low water spring tides, and finishing there on August 24, 1903, it proceeded to Port Hood and there improved the channel near the coal piers of the Port Hood Coal Company, at the public wharf, and Smith's wharf until October 1, when the dredge was removed to Eastern harbour, Cheticamp, in the same county, where it operated, weather permitting, until November 27, when it was placed in winter quarters. During the winter and spring the dredge's hull and machinery and scows were put in order and ready for work. In the spring of 1904, dredging was resumed at Cheticamp and was in progress at the close of the fiscal year.

The Dredge 'Cape Breton.'

At the opening of the fiscal year 1903-04, this dredge operating at Point du Chene in Westmorland county, New Brunswick, continuing there until July 17, when it completed the channel out to the range lights at the harbour entrance. The dredge was transferred to Caraquet, in Gloucester county, New Brunswick, where dredging to 22 feet at low water spring tides was done to prepare the foundation of a new wharf ; also in deepening the water around the old wharf at that place, all of which was completed by September 15. The dredge was then removed to Neguac, Northumberland county, New Brunswick, and continued there until November 2, when 6,300 yards had been removed, and owing to having encountered rock the machinery was broken, and the work stopped. The season being late and the dredge and barges requiring to go on the marine slip for repairs, the plant was removed to Pictou, and necessary repairs completed. From May 25 to June 3, the dredge was engaged improving the depth of water at the Acadia Coal Company's loading piers at Pictou landing in Pictou harbour, Nova Scotia, and from June 4 to 14, in opening a channel from the main channel to Hogg, Craig & Co.'s wharf at Pictou, and June 15 and 16, giving greater depth to water at Burham & Morrell's wharf at Pictou, and from June 17 to 22, in operating at the Intercolonial Railway wharf at Pictou landing in Pictou harbour. Then from June 23 to 30, at the Harbour Commissioner's wharf (known as Market wharf) at Pictou, when the plant was removed to Eastern harbour, Cheticamp, Inverness county, Nova Scotia.

The Dredge 'New Brunswick.'

At the beginning of the fiscal year 1903-04, this dredge was operating on the Russell bar, St. John river, York county, New Brunswick, and continued work there until August 5, when the water was getting too low on the bar, the dredge and plant were removed to Gagetown canal, Queen's county, New Brunswick, where it operated from August 6 to 16, and then removed to the Oromocto shoal in Sunbury county, New Brunswick, where it operated from August 17 to November 5, when it returned to Gagetown and dredged from November 6 to 14 in further improving the channel there. The plant was then removed to St. John, into winter quarters there. The dredge was made ready, and on February 18, 1904, began dredging for the winter port improvements, St. John Harbour, which it continued until June 30, when the dredge was ordered to work on the Washademoak, on the St. John river.

The Tug 'Cricket.'

This tug attended and served the dredge 'New Brunswick' during the year, except while the dredge operated at the winter port berths for the city of St. John ; the dredge was then attended to by the Messrs. Tapleys' tugs, and for a time by tug 'Rona.'

The Tug 'Rona.'

The tug 'Rona,' a new tug purchased by the department, was fitted out and attended the dredge 'New Brunswick' at the winter port work from March 14 until May 14, when it joined the dredge 'Geo. McKenzie' at Cheticamp and is proving to be a good vessel for the service.

Memorandum of quantities removed by the several dredges in the maritime provinces during the fiscal year 1903-1904:—

	Cubic Yards.
'St. Lawrence'	51,100
'Canada'	33,210
'New Dominion'	111,175
'Prince Edward'	49,500
'Geo. McKenzie'	19,150
'Cape Breton'	54,845
'New Brunswick'	77,920
Fowlie's dredge	1,205
	398,105

DREDGE VESSELS REPAIRS AND WINTERING, ETC.

Maritime Provinces.

The following amounts were expended on repairs and renewals to dredges and plant, during the year 1903-1904 :—

'St. Lawrence'	$ 4,272 63
'Canada'	7,547 86
'New Dominion'	2,084 59
'Prince Edward'	2,934 85
'Geo. MacKenzie'	1,613 90
'Cape Breton'	3,841 57
'New Brunswick'	738 62
Tug 'Cricket'	378 08
" 'Rona'	31 64
	$23,443 74

NEW DREDGING PLANT.

Tug 'Rona'	$ 2,577 72

DREDGING PLANT.

The following is a summary description of the dredging plant owned and operated by the Public Works Department in the Maritime provinces :—

The self-propelling Elevator Dredge 'St. Lawrence' (iron hull).

Length over all—175 feet.
Beam—30 feet.
Draft when loaded aft—13·5 feet.
Draft when loaded forward—8·5 feet.
Least working depth (ladder with 32 buckets dropped 30 feet from bow) 8·5 feet.
Greatest working depth (bucket ladder dropped 40 feet from bow)—28 feet.
Capacity of hopper for spoil material—350 cubic yards.
Speed when light—6 to 7 miles per hour.
Speed when loaded—3 to 4 miles per hour.
Daily rate of dredging hard material—350 to 700 cubic yards.
" " ordinary earth—750 to 1,000 cubic yards.
" " soft material—1,050 to 1,400 cubic yards.

The self-propelling Elevator Dredge 'Canada' (iron hull).

Length over all—130 feet.
Beam—20 feet.
Draft when loaded aft—11·5 feet.
Draft when loaded forward—7 feet.
Least working depth—7 feet.
Greatest working depth (ladder, 24 buckets)—16 feet.
Capacity of hopper for spoil material—90 cubic yards.
Speed when light and newly painted—6 to 7 miles per hour.
Speed when loaded—3 to 4 miles per hour.
Daily rate of dredging in hard bottom—180 to 270 cubic yards.
" " with ordinary digging—180 to 360 cubic yards.
" " in soft material—360 to 450 cubic feet.

The Spoon Dredge 'New Dominion' (wooden hull).

Length over all—90 feet.
Width—28 feet.
Draft—5½ feet.
Greatest working depth—21 feet.
Daily rate of dredging in hard material—300 cubic yards.
" " with ordinary material—450 cubic yards.
" " in soft material—600 to 700 cubic yards.
Number of dump scows or barges used—4 (2 are condemned).

The Spoon Dredge 'Prince Edward' (wooden hull).

Length over all—80 feet.
Width—28 feet.
Draft—6 feet.
Greatest working depth—21 feet.
Daily rate of dredging in hard material—300 cubic yards.
" " with ordinary material—500 cubic yards.
" " in soft material—600 to 700 cubic yards.
Number of dump scows or barges used—3.

The Spoon or Dipper Dredge 'George McKenzie' (wooden hull).

Length—90 feet.
Width—28 feet.
Draft—6 feet.
Greatest working depth—22 feet.
Daily rate of dredging in hard material—350 cubic yards.
" " with ordinary material—500 cubic yards.
" " in soft material—600 cubic yards.
Number of dump scows or barges used—3.

The Boom and Dipper Dredge 'Cape Breton' (steel hull).

Length—91 feet.
Beam—36 feet.
Draft—7½ feet.
Greatest working depth—34 feet.
Daily rate of dredging hard material—1,000 cubic yards.
" " ordinary material—1,500 cubic yards.
" " soft material—2,000 cubic yards.
Number of barges used (each of 210 cubic yards capacity—steel)—2.

The Clam Shell Dredge 'New Brunswick' (wooden hull).

Length over all—90 feet.
Width—25 feet.
Draft—2½ feet.
Greatest working depth—17 feet.
Daily rate of dredging in hard material—180 cubic yards.
" " ordinary material—300 cubic yards.
" " soft material—450 cubic yards.
Number of decked scows used—3.

Tug 'Cricket.'

Length—36·5 feet.
Beam—7·3 feet.
Draft—3·10.
Horse power—4.

Tug 'Rona.'

Length—85 feet.
Beam—19·3 feet.
Draft—8 feet.
Horse power—25.
One pile-driver, engine and boiler fitted on scow.
One stone lifter, engine and large grips (no boiler).

CLASSIFICATION of Disbursements of the Dredges in the Maritime Provinces during the Year ending June 30, 1904.

DREDGE 'ST. LAWRENCE.'

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	483 33	483 33	549 00	483 33	489 56	483 33	466 55	262 33	262 33	262 33	486 91	561 33	5,273 66
Coal	135 00	735 00	.....	345 00	30 00	.....	.....	.....	126 05	.....	174 38	320 62	1,866 05
Provisions	145 64	136 67	109 49	145 52	100 66	148 79	128 11	.....	.....	.....	179 37	148 48	1,242 73
Stores	6 00	.....	.....	27 09	12 88	61 71	.....	.....	35 40	.....	61 59	2 00	206 67
Equipment	197 02	.....	.....	.....	.....	.....	.....	.....	53 62	223 67	.....	.....	474 31
Water	5 30	.....	.....	29 00	18 00	.....	.....	.....	4 00	.....	.....	.....	56 30
Repairs	194 45	27 30	.....	.....	165 35	3 05	27 35	159 56	656 97	328 30	819 91	17 78	2,400 02
Pilotage	60 00	78 00	.....	81 00	66 00	.....	.....	.....	.....	.....	.....	.....	285 00
Towage	10 00	.....	.....	10 00	10 00	.....	.....	.....	.....	.....	.....	.....	30 00
Wharfage	20 00	.....	.....	.....	134 00	8 25	.....	.....	.....	.....	18 00	31 00	211 25
Contingencies	12 42	5 02	2 35	.....	7 17	8 25	.....	2 35	14 15	5 28	.....	9 04	66 03
Totals	1,269 16	1,465 32	660 84	1,120 94	1,033 62	713 38	622 01	424 24	1,152 52	819 58	1,740 16	1,090 25	12,112 02
Working expenses	1,074 71	1,438 02	660 84	1,120 94	868 27	227 00	Nil.	Nil.	233 22	223 67	920 25	1,072 47	7,839 39
Repairs ordinary	Nil.	27 30	Nil.	Nil.	165 35	Nil.	Nil.	Nil.	4 38	Nil.	703 75	17 78	918 56
" extraordinary	194 45	Nil.	Nil.	Nil.	Nil.	486 38	622 01	424 24	914 92	595 91	116 16	Nil.	3,354 07
Totals	1,269 16	1,465 32	660 84	1,120 94	1,033 62	713 38	622 01	424 24	1,152 52	819 58	1,740 16	1,090 25	12,112 02

DREDGE 'CANADA'.

Wages	478 46	430 48	426 85	430 00	428 50	385 85	222 00	278 25	367 25	283 37	370 18	456 29	4,557 48
Coal	255 35	367 35	500 00	5 00		91 55						130 13	1,349 38
Provisions	98 15	105 86	87 48	88 75	74 43	65 60					72 79	116 21	709 27
Stores	4 99	14 38		11 60	5 73	16 17		1 63			98 51	169 73	322 74
Equipment	4 50								48 12		24 08	97 72	174 42
Water	5 00	5 00	14 90	15 00	20 18	7 50							67 58
Repairs	16 38	37 06				185 11	33 79	128 16	472 53	142 38	545 91	4,901 55	6,462 87
Pilotage		36 00	44 00	54 00	50 00	35 50							219 50
Towages									10 00			10 00	20 00
Wharfage	15 00	15 00											30 00
Contingencies	62 43	4 00	10 02	3 29	1 90	5 41	5 15	2 49	13 95		8 68	7 70	125 02
Totals	940 26	1,015 13	1,083 25	607 64	580 74	792 69	260 94	410 53	911 85	425 75	1,120 15	5,889 33	14,038 26
Working expenses	923 88	978 07	1,083 25	607 64	580 74	607 58	13 94	Nil	133 28	Nil.	574 24	987 78	6,490 40
Repairs, ordinary	16 38	Nil.	Nil.	Nil.	Nil.	4 77	Nil.	Nil.	Nil.	Nil.	343 83	4,901 55	5,266 63
" extraordinary	Nil.	37 06	Nil.	Nil.	Nil	180 34	247 00	410 53	778 57	425 75	202 08	Nil.	2,281 23
Totals	940 26	1,015 13	1,083 25	607 64	580 74	792 69	260 94	410 53	911 85	425 75	1,120 15	5,889 33	14,038 26

DREDGE 'NEW DOMINION'

Wages	367 33	370 00	360 62	358 15	339 83	526 20	518 11	405 02	387 57	409 64	509 03	390 55	4,942 05
Coal			194 75		298 03			60 00	90 00	144 03	154 66	142 60	1,084 07
Provisions	80 63	94 66	80 36	54 58	21 48		19 72	74 29	125 74	89 20	92 61	100 52	833 79
Stores			3 84				7 01	24 06	47 06			15 00	97 00
Equipment									204 89		59 14		264 03
Water		12 00							102 00		108 50	68 38	290 88
Repairs		9 51	2 64	14 35	35 83	273 75	245 82	187 05	11 31	129 50	113 40	115 83	1,138 99
Pilotage													
Towage	520 00	530 00		1,120 00	370 00			447 00	705 00	739 00	651 00	780 00	5,862 00
Wharfage													
Contingencies	0 27		2 37	0 29	6 85	2 87	0 30	0 66	0 52	1 00		6 82	21 95
Totals	968 23	1,016 17	644 58	1,547 37	1,072 02	802 82	790 99	1,198 08	1,674 09	1,512 37	1,688 34	1,619 70	14,534 76
Working expenses	968 23	1,006 66	642 21	1,533 02	1,004 69	8 87	213 91	986 01	1,656 03	1,351 73	1,574 94	1,503 87	12,450 17
Repairs, ordinary	Nil.	Nil.	2 37	Nil.	Nil.	Nil.	20 00	Nil.	Nil.	59 80	113 40	115 83	311 40
" extraordinary	Nil.	9 51	Nil.	14 35	67 33	793 95	557 08	212 07	18 06	100 84	Nil.	Nil.	1,773 19
Totals	968 23	1,016 17	644 58	1,547 37	1,072 02	802 82	790 99	1,198 08	1,674 09	1,512 37	1,688 34	1,619 70	14,534 76

CLASSIFICATION of Disbursements of Dredges in the Maritime Provinces, &c.—*Continued.*

DREDGE 'PRINCE EDWARD.'

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	395 00	391 07	401 59	385 00	385 00	264 36	150 00	183 28	325 74	690 08	748 94	429 40	4,749 46
Coal			6 50	119 30	85 37	7 75		177 80	2 70	11 00		98 49	508 91
Provisions		61 28	204 31	10 86	152 68	70 96					18 00	227 87	745 96
Stores			17 69										17 69
Equipment			41 84			99 46				142 40			283 70
Water			118 65	67 80	52 50						39 70	64 95	343 60
Repairs				9 85	27 00	61 32		273 46	168 69	3 25	135 56	896 97	1,576 10
Pilotage			35 00		52 00								87 00
Towage	650 00	637 50	1,215 00	550 00	550 00						362 50	650 00	4,615 00
Wharfage													
Contingencies			8 75	44 74	20 43		6 95		10 80	6 25	2 62	40 45	140 99
Totals	1,045 00	1,089 85	2,049 33	1,187 55	1,324 98	503 85	156 95	634 54	507 93	852 98	1,307 32	2,408 13	13,068 41
Workings expenses	1,045 00	1,089 85	2,049 33	1,177 70	1,297 98	442 53	Nil.	177 80	10 80	159 65	1,171 76	1,511 16	10,133 56
Repairs, ordinary	Nil.	Nil.	Nil.	Nil.	27 00	61 32	Nil.	Nil.	Nil.	Nil.	135 56	896 97	1,120 85
" extraordinary	Nil.	Nil.	Nil.	9 85	Nil.	Nil.	156 95	456 74	497 13	693 33	Nil.	Nil.	1,814 00
Totals	1,045 00	1,089 85	2,049 33	1,187 55	1,324 98	503 85	156 95	634 54	507 93	852 98	1,307 32	2,408 13	13,068 41

DREDGE 'GEO. MCKENZIE.'

Wages	474 25	393 69	395 34	399 73	393 75	280 15	155 00	152 50	355 21	441 49	336 47	474 50	4,252 08
Coal		85 56		164 00		75 00						308 70	633 26
Provisions	47 79	132 87	119 92	60 22	55 38	43 48					100 02	87 02	646 70
Stores			5 60	21 16	3 69		8 30				76 51		115 26
Equipment	101 68			258 45							109 00		469 13
Water		51 00	37 41	42 00	102 00								232 41
Repairs				5 76		84 20		12 93	88 73	297 52		6 00	495 14
Pilotage	7 00												7 00
Towage	1 110 00	650 00	200 00	1,425 00	625 00							270 00	4,280 00
Warfage	20												20
Contingencies	13 42	9 48	7 51	16 46	39 31	7 45	91		4 63	72	18 59	1 89	120 37
Totals	1,754 34	1,322 60	765 78	2,392 78	1,219 13	490 28	164 21	165 43	448 57	739 73	640 59	1,148 11	11,251 55
Working expenses	1,754 34	1,322 60	765 78	2,387 02	1,219 13	406 08					640 59	1,142 11	9,637 65
Repairs, ordinary				5 76		3 80						6 00	15 56
" extraordinary						80 40	164 21	165 43	448 57	739 73			1,598 34
Totals	1,754 34	1,322 60	765 78	2,392 78	1,219 13	490 28	164 21	165 43	448 57	739 73	640 59	1,148 11	11,251 55

DREDGE 'CAPE BRETON.'

Wages	435 00	435 00	423 97	423 98	427 26	403 77	140 00	160 00	179 94	255 00	310 41	482 80	4,017 13
Coal	180 55	361 57	567 77	112 50					23 31		92 43	162 34	1,500 47
Provisions	163 95	8 00	240 73	2 90	221 75	120 43					105 99	107 33	971 08
Stores					166 86	4 10		15 63	27 01		72 68		286 28
Equipment						10 00		7 50	43 58	147 90		191 32	400 30
Water	33 00	22 50	27 00		30 00							22 50	135 00
Repairs	10 00	13 09				521 46		59 39	176 33	487 09	35 86	1,383 52	2,686 74
Pilotage	25 00			20 00									45 00
Towage	800 31	1,140 63		1,225 00	2,905 00	214 93	25 00	300 00			13 00	965 00	7,588 87
Wharfage											24 00		24 00
Contingencies	2 00	9 16		21 16		6 58		5 46	8 15		9 55	7 18	69 24
Totals	1,649 81	1,989 95	1,259 47	1,805 54	3,750 87	1,281 27	165 00	547 98	458 32	889 99	663 92	3,261 99	17,724 11
Working expenses	1,639 81	1,976 86	1,259 47	1,805 54	3,750 87	356 04	25 00	323 13	91 39	147 90	628 06	1,878 47	13,882 54
Repairs, ordinary	10 00										35 86	1,383 52	1,429 38
" extraordinary		13 09				925 23	140 00	224 85	366 93	742 09			2,412 19
Totals	1,649 81	1,989 95	1,259 47	1,805 54	3,750 87	1,281 27	165 00	547 98	458 32	889 99	663 92	3,261 99	17,724 11

CLASSIFICATION of Disbursements of Dredges in the Maritimes Provinces, &c.—*Continued.*

DREDGE 'NEW BRUNSWICK'.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	477 47	435 40	365 14	391 98	311 50	110 00	143 77	246 19	350 63	376 00	336 82	420 51	3,965 41
Coal	125 37	69 43	139 33					55 54	181 25		142 59	118 21	831 72
Provisions	210 00	175 07	147 43	161 57	121 28			13 70	60 06	163 99	152 86	81 05	1,290 01
Stores	9 60			6 07	4 51		2 00	43 64	0 45	42 78	42 65	21 03	172 73
Equipment	42 50			12 50					129 57				184 57
Water		12 50					5 00		72 50		83 88	45 63	219 51
Repairs				4 43		41 40	14 95	172 89	69 12	30 93	33 62	85 39	452 73
Pilotage													
Towage		140 00	809 45	540 00	343 30			111 00	160 00	27 50	361 50	561 00	3,053 75
Wharfage													
Contingencies	11 80	3 75			5 37	3 93	2 05					3 80	30 70
Totals	876 74	836 15	1,461 35	1,119 55	785 96	155 33	167 77	642 96	1,023 58	641 20	1,153 92	1,336 62	10,201 13
Working expenses	876 74	836 15	1,461 35	1,115 12	785 96	113 93	9 05	455 25	868 41	569 02	1,120 30	1,251 23	9,462 51
Repairs, ordinary	Nil.	Nil.	Nil.	Nil.	Nil.	41 40	Nil.	Nil.	Nil.	28 14	33 62	85 39	188 55
" extraordinary	Nil.	Nil.	Nil.	4 43	Nil.	Nil.	158 72	187 71	155 17	44 04	Nil.	Nil.	550 07
Totals	876 74	836 15	1,461 35	1,119 55	785 96	155 33	167 77	642 96	1,023 58	641 20	1,153 92	1,336 62	10,201 13

TUG 'CRICKET.'

Wages	107 90	85 00	81 42	85 00	86 46					51 75		41 88	539 41
Coal	22 40	165 56	131 25										319 21
Provisions	39 00	39 86	24 86	26 57	22 28								152 57
Stores	6 19	3 70		3 40									13 29
Equipment													
Water													
Repairs				23 96					92 80	1 98	170 02	26 57	315 33
Pilotage													
Towage													
Wharfage													
Contingencies					1 35							70	2 05
Totals	175 49	294 12	237 53	138 93	110 09	Nil.	Nil.	Nil.	92 80	53 73	170 02	69 15	1,341 86
Working Expenses	175 49	291 12	237 53	111 97	99 09				Nil.	Nil.	Nil.	42 58	963 78
Repairs, ordinary	Nil.	Nil.	Nil.	Nil.	Nil.				Nil.	Nil.	170 02	26 57	196 59
" extraordinary	Nil.	Nil.	Nil.	23 96	11 00				92 80	53 73	Nil.	Nil.	181 49
Totals	174 49	294 12	237 53	138 93	110 09	Nil.	Nil.	Nil.	92 80	53 73	170 02	69 15	1,341 86

TUG 'RONA.'

Wages									169 79	211 64	195 79	190 00	767 22
Coal									131 63	124 77	41 87	124 90	423 17
Provisions									33 78	39 11	119 58	33 58	226 05
Stores									6 00	34 88	1 25		42 13
Equipment									27 49	1 40			28 89
Water										9 39		25 02	34 41
Repairs													
Pilotage													
Towage													
Wharfage											3 00		3 00
Contingencies									2 25		1 90	5 87	13 02
Totals	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	370 94	421 19	366 39	379 37	1,537 89
Working expenses									370 94	389 55	366 39	379 37	1,506 25
Repairs, ordinary									Nil.	Nil.	Nil.	Nil.	Nil.
" extraordinary									Nil.	31 64	Nil.	Nil.	31 64
Totals	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	370 94	421 19	366 39	379 37	1,537 89

CLASSIFICATION AND QUANTITIES of Material removed by Dredges in the Maritime Provinces during the Year ending June 30, 1903.

DREDGE 'ST. LAWRENCE.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Clay and stone												1,750	1,750
Clay and mud											1,050	350	1,460
Mud and stone											1,400		1,400
Sand—ordinary	7,000	8,400	9,100	4,900	3,150							1,750	34,300
Mud											3 850	8,400	12,250
Totals	7,000	8,400	9,100	4,900	3,150						6,300	12,250	51,100

DREDGE 'CANADA.'

Sawdust		900											900
Mud and shells		2,970											2,970
Mud and coal												630	630
Clay and mud												720	720
Sand — ordinary and sawdust	4,140	270											4,410
Sand —and mud	720				4,500								5,220
Mud	180	2,430	5,490	4,950	1,890	2,610						810	18,360
Totals	5,040	6,570	5,490	4,950	6,390	2,610						2,160	33,210

DREDGE 'NEW DOMINION.'

Stone, mud & edgings												10,575	10,575
Gravel			1,590										1,590
Gravel and mud			2,685										2,685
Clay and mud	12,900	15,275	8,075	1,800									38,050
Sand, clay and mud				5,325									5,325
Stone and mud							3,675			2,325			6,000
Sand—very fine & mud			1,425		6,150								7,575
Mud	4,050	1,200	75	8,025			1,625	9,150	9,550	5,700			39,375
Totals	16,950	16,475	13,850	15,150	6,150		5,300	9,150	9,550	8,025	10,575		111,175

DREDGE 'PRINCE EDWARD.'

Mud and shells		2,700											2,700
Sand			675	6,030	2,700								9,405
Clay and stone												5,625	5,625
Clay, sand and shells	810											1,755	2,565
Sand, clay and shells										4,995			4,995
Sand—ordinary & clay	9,000	3,555			1,395								13,950
Sand—very fine & mud		2,070	2,745										4,815
Clay and rock												5,445	5,445
Totals	9,810	8,325	3,420	6,030	4 095					4,995	12,825		49,500

DREDGE 'GEO. McKENZIE.'

Sand, hard-pan, and gravel	900												900
Sand and stone			405	180						225			810
Sand—ordinary and gravel	1,260	3,245											4,505
Sand		225	2,160	1,835	660					1,125	6,930		12,935
Totals	2,160	3,470	2,565	2,015	660					1,350	6,930		19,150

CLASSIFICATION AND QUANTITIES of Material removed by Dredges in the Maritime Provinces, &c.—*Continued.*

DREDGE 'CAPE BRETON.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Sand and shells	840		840										1,680
Clay, rock and sand											1,785	1,260	3,045
Clay											3,570	16,310	19,880
Sand and ledge				6,300									6,300
Clay and sand		6,300											6,300
Sand—and mud	2,100		4,410										6,510
Sand—ashes	3,360	4,305	630									840	9,135
Mud	1,995												1,995
Totals	8,295	10,605	5,880	6,300							5,355	18,410	54,845

DREDGE 'NEW BRUNSWICK.'

Rock and Gravel	3,185	665											3,850
Sand and mud					5,850								5,850
Gravel	1,710												1,710
Clay		2,320			450						1,100		3,870
Clay and edgings								840	4,250	3,300			8,390
Sand—ordinary		7,370	15,785	16,830	875								40,860
Sand—and sawdust				1,750									1,750
Mud, sticks, logs & rock					320				1,050	1,450	3,350	5,470	11,640
Totals	4,895	10,355	15,785	18,580	7,495			840	5,300	4,750	4,450	5,470	77,920

DREDGE "F. A. FOWLIES DREDGE."

Mud and stone	1,205

DETAILS OF DREDGING IN THE MARITIME PROVINCES.

For the Fiscal Year ended June 30, 1904.

Dredge.	Locality.	Date.	Time Dredging.		Quantity. Cubic Yards.	Expenditure at Locality.	Per Cubic yard for Local Expenditure.	Winterings, Repairs, Equipment and Superintendence, *pro rata*.	Total Cost.	Per Cubic Yard for Total Expenditure.
			Hrs.	Min.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence...	Richibucto, Kent Co., N.B.	July 7 to Nov 16, 1903	183	55	32,550	4,606 39	0 14·15	4,936 43	9,542 82	0 29·31
	Skinner's Point New Pier, Pictou, Pictou Co., N.S	May 17 to June 2 and June 8 to 10, 1904	53	20	7,700	762 84	0 09·90	817 48	1,580 32	0 20·52
	Main Channel to Market Wharf, Pictou Co., N.S	June 3 to 7 and June 11 to 24 1904	44	00	9,100	626 98	0 06·88	671 91	1,298 89	0 14·27
	Pictou Bar, Pictou Co., N.S	June 25 to 30, 1904	6	35	1,750	166 63	0 09·52	178 57	345 20	0 19·72
Canada	Liverpool, Queen's Co., N.S.	July 1 to August 31, 1903	163	43	11,610	1,833 85	0 15·79	3,108 23	4,942 08	0 42·56
	Barrington, Shelburne Co., N.S.	Sept. 1 to Dec. 15, 1903	236	34	19,440	3,240 49	0 16·67	5,492 36	8,732 85	0 44·92
	Steamboat Wharf Yarmouth, Yarmouth Co., N.S.	June 17 to 30, 1904 alternately	13	15	720	138 88	0 19·29	235 39	374 27	0 51·98
	Marine Slip Yarmouth, Yarmouth Co.,	June 17 to 30, 1904	24	25	1,440	277 76	0 19·29	470 71	748 47	0 51·97
New Dominion	Grand Lake Flats, Queen's Co., N.B.	July 1 to Sept. 6 and Sept. 20 to Oct. 16, 1903	672	00	48,625	3,780 39	0 07·77	977 39	4,757 78	0 09·78
	Queens Coal Co., Queen's Co., N.B.	Sept. 7 to 19 and Oct. 17 to Nov 2, 1903	196	00	14,475	1,060 80	0 07·32	274 26	1,335 06	0 09·22
	Gagetown, Queen's Co., N.B	Nov. 3 to 6, 1903	76	00	5,475	536 84	0 09·80	138 79	675 63	0 12·34
	Winter Berths St. John, St. John Co., N. B.	Jan. 28 to April 12 and May 13 to June 30, 1904	474	30	32,950	5,046 07	0 15·31	1,304 62	6,350 69	0 19·27
	Intercolonial Ry. St. John Co., N.B.	April 13 to May 12, 1904	152	00	9,650	1,749 55	0 18·13	452 33	2,201 88	0 22·81
Prince Edward	Hallidays Wharf, Queen's Co., P.E.I.	July 1 to Aug. 13, 1903	274	00	13,365	1,890 29	0 14·14	1,054 25	2,944 54	0 22·03
	Vernon River Bridge " Co., P.E.I.	Aug. 14 to Sept. 10, 1903	177	00	7,380	1,262 00	0 17·10	703 83	1,965 83	0 26·63
	Morrell, King's Co., P.E.I	Sept. 11 to Nov. 27, 1903 and May 14 to June 30, 1904	648	01	28,755	5,690 97	0 19·79	3,174 03	8,865 00	0 30·82
Geo. McKenzie	Mabou, Inverness Co., N.S	July 1 to Aug. 24, 1904	152	00	5,405	2,676 98	0 49·52	1,163 28	3,840 26	0 71·05
	Port Hood, Inverness Co. N.S.	Aug. 25 to Oct. 1, 1904	98	00	2,970	1,447 98	0 48·75	629 20	2,077 18	0 69·94
	Eastern Harbour, Cheticamp, N.S.	Oct. 2 to Nov. 27, 1903 and May 25 to June 30, 1904	285	00	10,775	4,555 96	0 42·28	1,979 80	6,535 76	0 66·65

Cape Breton	Point du Chene, Westmoreland Co., N.B.	July 1 to 17, 1903	49	15	8,295	851 30	0	10 29	850 16	1,704 75	0	20 55
	Caraquet, Gloucester Co., N.B.	July 18 to Sept. 15, 1903	84	15	16,185	3,163 23	0	19 18	3,149 40	6,312 23	0	38 29
	Negaunee, Northumberland Co., N.B.	Sept. 16 to Nov 2, 1903	49	30	6,300	3,192 73	0	55 11	3,477 03	6,969 76	1	10 63
	Acadia Coal Pier, Pictou, Pictou Co., N.S.	May 25 to June 3, 1901	43	75	8,100	156 38	0	05 13	451 33	910 71	0	10 81
	Hogg, Craig & Co. Wharf, Pictou, Pictou Co., N.S.	June 4 to 11, 1901	29	60	6,990	663 50	0	09 91	600 79	1,204 29	0	19 77
	Burnham & Morrill Pictou, Pictou Co., N.S.	June 15 and 16, 1901	5	60	1,050	105 83	0	10 08	105 36	211 19	0	16 90
	Intercolonial Ry. Wharf, Pictou, Pictou Co., N.S.	June 17 to 22, 1901	18	60	3,395	287 69	0	08 47	286 39	574 08	0	16 90
New Brunswick	Market Wharf, Pictou, Pictou Co., N.S.	June 25 to 30, 1901	23	60	4,830	398 85	0	08 25	397 05	795 90	0	16 47
	Russell Bar, York Co., N.B.	July 1 to Aug. 5, 1903	163	30	5,560	1,232 61	0	22 16	353 01	1,585 62	0	28 51
	Capetown Wharf & Canal, Queen's Co., N.B.	Aug. 6 to 16 and Nov. 6 to 14, 1903	118	60	6,870	851 49	0	12 40	243 86	1,095 35	0	15 96
	Oromocto Shoals Sunbury Co., N.B.	Aug. 17 to Nov. 5, 1903	611	30	11,360	3,556 20	0	08 01	1,018 47	4,574 67	0	10 31
	Winter Berths, St. John, St. John Co., N.B.	Feb. 18 to June 30, 1904	561	45	21,130	4,617 45	0	21 85	1,322 42	5,939 87	0	28 11
			5690	18	386,900	60,971 91	0	15 76	40,021 03	100,992 94	0	25 44

Fowlie's Dredge, Negaunee, Northumberland Co., N.B., June to 30, 1904, 1,295 yds.

Expenditure for dredging in Nova Scotia for the Thirty-two years ended June 30, 1904.

County:	Locality.	Total for the thirty-one years ended June 30, 1903.			For the year 1903-04.			Total quantity. Cubic yards.	Total cost.	Cost for each County.
		Quantity. Cubic yards.	Cost.	Cost for County.	Quantity. Cubic yards.	Cost.	Cost for County.			
			$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
Antigonish	Antigonish	22,025	3,649 15					22,025	3,649 15	
	Harbour An Bonche	59,243	19,703 33					59,243	19,703 33	
	Tracadie	12,245	5,530 29					12,245	5,530 29	
	McNair's Cove	11,265	10,035 68					11,265	10,035 68	
	Bayfield	12,871	9,505 79					12,871	9,505 79	
	Arisaig	8,330	7,452 26					8,330	7,452 26	
	Cribbin's Point	4,675	4,125 19	60,001 69				4,675	4,125 19	60,001 69
Annapolis	Annapolis	2,825	1,635 68	1,635 68				2,825	1,635 68	1,635 68
Cape Breton	Lingan	22,267	9,275 56					22,267	9,275 56	
	Sydney	62,917	20,904 88					62,917	20,904 88	
	Little Glace Bay	46,450	16,936 02					46,450	16,936 02	
	Port Caledonia	17,413	8,242 21					17,413	8,242 21	
	Benacadie Pond	20,860	5,993 90					20,860	5,993 90	
	Christmas Island	19,045	3,364 98					19,045	3,364 98	
	Cow Bay	3,255	1,892 32					3,255	1,892 32	
	Main A Dieu	1,680	2,720 76					4,680	2,720 76	
	Louisburg	22,310	5,480 52					22,310	5,480 52	
	North Sydney (Coal & Steel Co)	15,190	6,648 45					15,190	6,648 45	
	" (Salter's Wharf)	630	315 01	81,774 61				630	315 01	81,774 61
Colchester	Tatamagouche	65,480	20,373 07	20,373 07				65,480	20,373 07	20,373 07
Cumberland	Parrsboro'	42,595	12,804 68					42,595	12,804 68	
	Wallace	93,865	24,140 37	36,945 05				93,865	24,140 37	36,945 05
Digby	Digby	35,740	11,009 10					55,740	11,009 10	
	Weymouth	88	28 62	11,037 72				88	28 62	11,037 72
Guysboro	Guysboro'	5,400	1,413 53					5,400	1,413 53	
	Larry's River	47,655	16,519 85					47,655	16,519 85	
	Port Mulgrave	4,347	2,494 81					4,347	2,494 81	
	Sherbrooke	1,260	496 49					1,260	496 49	
	Cook's Cove	16,815	7,336 29					16,815	7,336 29	
	St. Mary's River	81,812	22,352 04					81,812	22,352 04	
	Tickle Passage, Little Canso	3,015	4,477 97					3,015	4,477 97	
	Bar Sonora, St. Mary's River	5,628	2,204 33	57,295 31				5,628	2,204 33	57,295 31

Halifax	Chezzetcook	3,920	2,593	71							3,920	2,593	71	
	Halifax Ferry	6,177	2,063	38							6,177	2,063	38	
	Herring Cove	26,101	12,049	68							26,101	12,049	68	
	Ketch Harbour	1,227	1,690	53							4,227	1,690	53	
	Richmond Wharf	792	182	53							792	182	53	
	Roche's Wharf	1,750	620	28							1,750	620	28	
	Halifax Rly. terminus	35,565	11,056	79							35,565	11,056	79	
	Jeddore	21,515	4,958	56							21,515	4,958	56	
	North West Arm	7,350	2,970	39							7,350	2,970	39	
	Cunard's Wharf	1,400	530	04							1,400	530	04	
	Salmon River	14,288	5,962	93							14,288	5,962	93	
	Spry Bay	10,665	3,075	72							10,665	3,075	72	
	Eastern Passage	2,070	596	97							2,070	596	97	
	Sambro	4,815	1,388	61	49,740	12					4,815	1,388	61	49,740 12
Inverness	Whycocomagh	19,760	3,491	31							19,760	3,491	31	
	Campbell's Pond	4,940	872	83							4,940	872	83	
	Port Hastings	270	190	37							270	190	37	
	Cheticamp	187,885	62,177	62			10,775	6,535	76		198,620	69,013	38	
	Mabou	128,317	49,126	92			5,405	3,840	26		133,752	52,967	18	
	Port Hood	7,153	3,619	81			2,970	2,077	18		10,123	5,696	99	
	Grand Etang	10,980	3,131	25	123,210	11				12,453 20	10,980	3,431	25	135,663 31
Lunenburg	Lunenburg	70,510	22,191	57							70,510	22,191	57	
	Mahone Bay	21,844	5,958	65							21,844	5,958	65	
	Vogler's Cove	11,610	5,075	53	33,228	75					11,610	5,075	53	33,228 75
Pictou	Acadia Coal Co., wharf	14,060	4,351	55			8,400	910	71		22,460	5,262	26	
	Albion Mines	9,475	2,184	25							9,475	2,184	25	
	East River	144,407	17,696	43							144,407	17,696	43	
	Halifax Coal Co., wharf	1,650	359	90							1,650	359	90	
	Pictou, Public Market, wharf	85,270	23,321	86			13,930	2,094	79		99,200	25,416	65	
	" Railway "	61,254	15,763	61			3,395	574	08		64,649	16,337	69	
	" Landing Ry. "	18,645	8,898	40							18,645	8,898	40	
	" Steam Ferry Co. Slip	720	246	18							720	246	18	
	" Bar	23,800	1,932	73			1,750	345	20		25,550	2,277	93	
	" Hogg, Craig & Co. whf						6,090	1,204	29		6,090	1,204	29	
	" Burnham & Morrell						1,050	211	19		1,050	211	19	
	Vale Colliery	1,395	682	15							1,395	682	15	
	River John	85,173	22,243	98							85,173	22,243	98	
	Granton	25,110	10,707	59							25,110	10,707	59	
	New Glasgow	35,445	11,795	79							35,445	11,795	79	
	Middle River	15,060	4,984	40							15,060	4,984	40	
	C. Dwyer's wharf	5,400	1,087	66							5,400	1,087	66	
	" berths for ss. 'Campania'	5,850	2,000	22							5,850	2,000	22	
	Dwyer & Co.'s wharf	360	123	09							360	123	09	
	Intern'l Coal Mining Co., East River, Pictou	39,200	5,830	54	164,207	33	7,700	1,580	32	6,920 58	46,900	7,410	86	171,127 91
Queen's	Liverpool	80,970	26,439	90			11,610	4,942	08		92,580	31,381	98	
	Port Mouton	10,620	2,283	77	28,723	67				4,942 08	10,620	2,283	77	33,665 75
Richmond	D'Escousse	23,650	10,052	76							23,650	10,052	76	
	St. Peter's Canal	90,830	27,435	95							90,830	27,435	95	
	St. Peter's	7,150	2,407	41							7,150	2,407	41	
	Grand Goulet	23,584	5,570	19							23,581	5,570	19	

EXPENDITURE for dredging in Nova Scotia for the Thirty-two years ended June 30, 1904.

County.	Locality.	TOTAL FOR THE THIRTY-ONE YEARS ENDED JUNE 30, 1903.			FOR THE YEAR 1903-1904.			Total quantity. Cubic yards.	Total cost.	Cost for each County.
		Quantity. Cubic yards.	Cost.	Cost for County.	Quantity cubic yards.	Cost.	Cost for County			
			$ cts.	$ cts.		$ cts.	$ cts.			
Richmond- *Con.*	River Bourgeois	18,920	4,468 87					18,920	4,468 87	
	Marine Slip	320	56 53					320	56 53	
	Poulement	10,080	2,566 14					10,080	2,566 14	
	Fourchu Harbour	16,875	9,454 94	62,013 09				16,875	9,454 94	62,013 09
Shelburne	Lockeport	75,358	18,026 86					75,358	18,026 86	
	Barrington Passage	40,780	13,123 31					40,780	13,123 31	
	Osborne	990	145 31					990	145 31	
	Wood's Harbour	1,170	245 45					1,170	245 45	
	Barrington Public Wharf and Sherrow's Channel	9,090	1,074 02	32,614 95	19,440	8,732 85	8,732 85	28,530	9,806 87	41,317 80
Yarmouth	Yarmouth	418,942	113,012 59		2,160	1,122 74		421,102	114,135 33	
	Milton	663	499 46	113,512 05			1,122 74	663	499 46	114,634 79
Hants	Windsor	5,450	1,627 60	1,627 60				5,450	1,627 60	1,627 60
Victoria	Aspy Bay	3,820	1,569 95	1,569 95				3,820	1,569 95	1,569 95
Dredge 'C. B.' losses			762 98	762 98					762 98	762 98
Totals		2,844,606	880,273 73	880,273 73	94,675	34,171 45	34,171 45	2,939,281	914,445 18	914,445 18

EXPENDITURE for dredging in Prince Edward Island for the thirty two years ended June 30, 1904.

King's	Grand River	76,170	15,304 04					76,170	15,304 04	
	Montague River	171,675	33,263 49					171,675	33,263 49	
	Murray Harbour South	101,253	18,147 03					101,253	18,147 03	
	Sturgeon	16,026	6,066 27					16,026	6,066 27	
	St. Mary's wharf	21,963	4,752 55					21,963	4,752 55	
	Georgetown Railway Wharf	1,002	408 32					1,002	408 32	
	Cardigan Bridge	35,955	8,619 36					35,595	8,619 36	
	Newport	3,240	917 82					3,240	917 82	
	Souris	3,825	1,083 53					3,825	1,083 53	

	Murray River	11,062	11,433 61					11,062	11,433 61		
	" Railway	5,926	1,860 30					5,926	1,860 30		
	Morrell			101,856 32	28,755	8,565 00	8,565 00	28,755	8,565 00	110,721 32	
Queen's	Charlottetown Railway Wharf	86,151	22,162 30					86,151	22,162 30		
	" Pownal	14,193	2,963 50					14,193	2,963 50		
	" Ferry	10,075	2,006 99					10,075	2,006 99		
	" Steam Nav. Co.	13,113	5,491 77					13,113	5,491 77		
	" Connolly Wharf	9,978	4,109 68					9,978	4,109 68		
	" Peake Bros	12,195	5,362 46					12,195	5,362 46		
	" Queen St. Slip	3,915	1,109 03					3,915	1,109 95		
	" Geo Peake Whf	5,805	1,611 42					5,805	1,644 42		
	" Poole	12,240	1,609 95					12,240	1,609 95		
	" McMillan	6,165	1,320 13					6,165	1,320 13		
	" Domin'n Building Sewer	5,355	1,146 68					5,355	1,146 68		
	" PublicSewerage	2,880	679 12					2,880	679 12		
	Webster's Corner, East River	203	43 47					203	43 47		
	Crapaud, Victoria	118,040	34,574 90					118,040	34,574 90		
	Pownal Bay	33,610	6,536 20					33,610	6,536 20		
	Rocky Point	82,920	13,426 13					82,920	13,426 13		
	Vernon River	17,860	6,326 72		7,380	1,965 83		25,240	8,292 55		
	Wood Islands	2,780	548 00					2,780	548 00		
	Nine Mile Creek	31,650	6,286 46					31,650	6,286 46		
	Hickey Wharf	750	150 51					750	150 51		
	Carrs Point	12,165	2,441 28					12,165	2,441 28		
	Pinette	3,825	756 24					3,825	756 24		
	Fort Augustus	3,195	631 68					3,195	631 68		
	Southport Ferry	45,300	7,508 75					45,300	7,508 75		
	Eed Point	7,161	3,879 60					7,161	3,879 60		
	North Rustico	13,536	4,775 38					13,536	4,775 38		
	South Rustico	11,649	4,109 67					11,649	4,109 67		
	Gauthier's Creek	17,847	8,305 50					17,847	8,305 50		
	Malpeque	28,575	3,483 32					28,575	3,483 32		
	French River	41,671	13,311 46					41,671	13,311 46		
	Bay View	4,095	1,912 87					4,095	1,912 87		
	Wedlocks	1,260	520 48					1,260	520 48		
	Belfast, Hallidays Wharf	2,070	1,524 24	170,958 89	13,365	2,941 54	1,910 37	15,435	4,168 78	175,869 26	
Prince	Summerside	91,571	28,032 51					91,571	28,032 51		
	Hurds Point Pier	65,505	14,315 47					65,505	14,315 47		
	Tignish	11,387	13,005 45					11,387	13,005 45		
	Cascumpec	1,157	538 42					1,157	538 42		
	Cape Traverse	16,740	5,105 89					16,740	5,105 89		
	Holmans Wharf	9,585	1,269 21	62,266 95				9,585	1,269 21	62,266 95	
	Total	1,336,271	335,082 16	335,082 16	49,500	13,775 37	13,775 37	1,385,771	348,857 53	348,857 53	

Expenditure for dredging in Quebec for the thirty two years ended June 30, 1904.

From appropriations Maritime Provinces.

County.	Locality.	Total for the thirty-one years ended June 30, 1903.			For the year 1903-04.			Total quantity. Cubic yards.	Total cost.	Cost for each County.
		Quantity. Cubic yards.	Cost.	Cost for County.	Quantity. Cubic yards.	Cost.	Cost for County.			
			$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
Magdalen Islands, Co. Gaspé	House Harbour	6,800	2,392 92					6,800	2,392 92	
Magdalen Islands, Co. Gaspé	Amherst Harbour	495	242 05	2,634 97				495	242 05	2,634 97
Témiscouata	Riviere du Loup	2,587	825 47	825 47				2,587	825 47	825 47
Rimouski	Rimouski	8,123	3,997 59	3,997 59				8,123	3,997 59	3,997 59
	Total	18,005	7,458 03	7,458 03	Nil.	Nil.	Nil.	18,005	7,458 03	7,458 03

Expenditure for dredging in New Brunswick for the thirty-two years ended June 30, 1904.

Gloucester	Bathurst	98,637	29,095 79					98,637	29,095 79	
	Caraquet			29,095 79	16,485	6,312 23	6,312 23	16,485	6,312 23	35,408 02
Kent	Richibucto	140,228	44,001 19		32,550	9,542 82		172,778	53,544 01	
	Cocagne	27,180	9,601 45					27,180	9,601 45	
	Buctouche	13,005	4,934 24					13,005	4,934 24	
	" Priests Point	3,510	1,110 70					3,510	1,110 70	
	" Chapel Point	4,140	1,310 07					4,140	1,310 07	
	" Robertsons wharf	45	14 23	60,971 88			9,542 82	45	14 23	70,514 70
King's	Belleisle Point	77,905	13,052 23					79,905	13,052 23	
	Kennebecasis River	116,270	20,081 83					116,270	20,081 83	
	Moss Glen	10,200	1,924 47	35,058 53				10,200	1,924 47	35,058 53
Northumberland	Horse Shoe, Miramichi	208,892	55,058 36					208,892	55,058 36	
	Outer Bar "	29,935	7,965 31					29,935	7,965 31	
	Grand Dune "	37,975	10,121 67					37,975	10,121 67	
	Gordon Flats "	22,425	4,403 95					22,425	4,403 95	
	Neguac "			77,549 29	6,300	6,969 76	6,969 76	6,300	6,969 76	84,519 05

Queen's	Grand Lake	153,692	23,328 32		48,625	1,757 78		202,317	28,086 10		
	McNair's Cove	20,440	4,522 82					20,440	4,522 82		
	Jemseg	87,230	17,190 06					87,230	17,190 06		
	Washademoak	65,675	8,073 65					65,675	8,073 65		
	Grimross, mid ground	12,040	3,274 99					12,040	3,274 99		
	Gagetown Creek Canal	33,590	5,968 99		12,345	1,770 98		45,935	7,739 97		
	Spoon Island	3,000	402 51					3,000	102 51		
	Wards Shoal, Salmon River	16,625	4,593 59					16,625	4,593 59		
	Curley Shoal	36,625	3,369 16					36,625	3,369 16		
	Chipman and Briggs Corner	104,275	12,269 49					104,275	12,269 49		
	Upper Gagetown wharf	1,700	1,104 90					1,700	1,104 90		
	McClure Shoal	39,525	1,556 66					39,525	1,556 66		
	Queen's Coal Co., Newcastle			88,655 14	14,475	1,335 06	7,863 82	14,475	1,335 06	96,518 96	
Restigouche	Dalhousie	22,301	6,543 08					22,301	6,543 08		
	Traverse	110,810	21,415 93	27,959 01				110,810	21,415 93	27,959 01	
St. John	I. C. Ry. terminus	200,842	49,683 52		9,650	2,201 88		210,492	51,855 40		
	Navy Island	25,294	9,296 79					25,294	9,296 79		
	Marble Cove	29,925	4,374 40					29,925	4,374 40		
	Murray's Mills	27,555	3,681 41					27,555	3,681 41		
	Indiantown wharf	1,615	192 83					1,615	192 83		
	Long wharf	7,137	2,680 24					7,137	2,680 24		
	Miller and Woodman	9,275	1,090 42					9,275	1,090 42		
	Hayford and Stetson	8,015	942 29					8,015	942 29		
	International wharf	450	52 90					450	52 90		
	Adams wharf	7,513	3,247 29					7,513	3,247 29		
	Anchor Line wharf	4,695	996 81					4,695	996 81		
	Dominion Atlantic wharf	15,525	4,484 72					15,525	4,484 72		
	St. John, Winter Berths	320,548	40,956 91		54,080	12,290 56		320,548	53,247 47		
	" Harbour Channel	3,413	5,063 92					3,413	5,063 92		
	Purves and Murchie Mill	675	142 57					675	142 57		
	McAvity's wharf	1,110	606 88					1,110	606 88		
	Lawtons wharf	570	101 46					570	101 46		
	Thorne wharf	1,980	249 02					1,980	249 02		
	Maritime Mail Co. wharf	1,425	224 52					1,425	224 52		
	Cushing Mill	20,850	1,222 86					20,850	1,222 86		
	Hilyard's Mill	1,400	314 10					1,400	314 10		
	Kennebecasis River	2,025	604 37	130,210 23			14,492 44	2,025	604 37	144,702 67	
Sunbury	Oromocto	351,087	61,842 91		11,360	1,574 67		395,447	66,427 58		
	McLean wharf	625	181 59					625	181 59		
	Ox Island	51,800	5,266 50					51,800	5,266 50		
	French Lake	25,475	3,787 49					25,475	3,787 49		
	Bents wharf, Maugerville	2,310	428 44					2,310	428 44		
	Upper Sheffield	3,830	425 15	71,942 08			4,571 67	3,830	425 15	76,516 75	
Westmorland	Point du Chene	133,035	34,582 71		8,295	1,701 76		141,330	36,287 47		
	Cape Tormentine	35,120	9,004 92	43,587 63			1,704 76	35,120	9,004 92	45,292 39	
York	Fredericton	126,365	21,679 06					126,365	21,679 06		
	St. Marys Ferry	15,570	6,827 36					15,570	6,827 36		
	Gibson	30,395	4,379 52					30,395	1,379 52		

EXPENDITURE for dredging in New Brunswick for the thirty two years ended June 30, 1904.

County.	Locality.	FOR THE THIRTY-ONE YEARS ENDED JUNE 30, 1903.			FOR THE YEAR 1903-1904.			Total Quantity Cubic yards.	Total Cost.	Cost for each County.
		Quantity Cubic yards.	Cost.	Cost for County.	Quantity Cubic yards.	Cost.	Cost for County			
			$ cts.	$ cts.		$ cts.	$ cts.			
York—*Con*.....	Naashwaak.....	1,600	435 22	.....	.....	.....	.....	1,600	435 22	.....
	Fisher and Chestnut Shoals..	8,200	1,547 12	.....	.....	.....	.....	8,200	1,547 12	.....
	Canada Eastern Ry. wharf.. .	3,970	1,013 98	.....	.....	.....	.....	3,970	1,013 98	.....
	Springhill, Chapel and Russel Bars.....	90,735	22,801 16	.....	5,560	1,585 62	.....	96,295	24,386 78	.....
	Robinsons Bar.....	6,965	1,717 16	.....	.....	.....	.....	6,965	1,717 16	.....
	Douglas Booms.....	14,235	1,512 87	61,913 45	.....	.....	1,585 62	14,235	1,512 87	63,499 07
	New Brunswick, equipment..	.....	1,591 12	1,591 12	.....	.....	.....	.....	1,591 12	1,591 12
	Total.....	3,124,019	628,534 15	628,534 15	252,725	53,046 12	53,046 12	3,376,744	681,580 27	681,580 27

STATEMENT of Dredging, Showing Quantities Removed in each Province and Cost of each Work for the Thirty-two Years Ended June 30, 1904.

Fiscal Year.	New Brunswick.		Nova Scotia.		Quebec.		Ppince Edward Island.		Total Quantity. Cubic Yards	Total Expenditure	Cost per Cubic Yard.
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.			
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1872-3	38,060	13,240 50	23,260	8,422 70					61,320	21,663 20	0. 35 32
1873-4	57,725	14,395 57	18,600	6,545 61	6,800	2,392 92			83,125	23,334 10	0. 28 71
1874-5	78,223	17,325 05	24,416	13,238 83			18,655	9,892 89	121,294	40,456 77	0. 33 354
1875-6	79,935	17,040 52	91,974	21,885 90			58,283	10,891 80	230,192	49,818 22	0. 21 642
1876-7	97,690	23,161 90	127,785	34,846 74			74,460	12,758 27	299,935	70,766 91	0. 23 594
1877-8	81,070	23,323 92	106,857	29,607 94			82,860	12,011 18	270,787	64,943 04	0. 23 983
1878-9	132,555	27,400 22	116,307	28,267 59			46,490	9,161 07	295,352	64,831 88	0. 21 951
1879-80	63,540	16,581 79	127,684	34,765 84	765	374 08	36,390	12,674 98	220,379	64,396 69	0. 28 197
1880-1	44,315	12,385 85	87,118	23,061 64	2,317	693 44	46,335	9,298 53	180,085	45,439 46	0. 25 232
1881-2	79,640	18,626 87	89,566	33,363 71			47,325	9,356 57	216,531	61,347 15	0. 28 331
1882-3	48,565	13,422 70	143,616	42,996 93			68,535	14,080 37	260,716	67,500 00	0. 25 890
1883-4	47,058	17,103 38	157,560	49,050 58			79,750	13,355 05	284,268	79,509 01	0. 27 959
1884-5	128,997	24,460 35	76,164	25,250 73	8,123	3,997 59	55,075	8,668 01	268,359	62,376 68	0. 23 242
1885-6	68,505	14,874 63	56,790	21,482 05			47,137	10,349 66	142,432	46,706 34	0. 32 793
1886-7	69,140	11,452 86	53,400	25,621 19			6,137	6,214 74	128,977	43,288 79	0. 33 56
1887-8	50,152	9,252 50	84,175	29,847 60			3,775	5,899 90	138,102	45,000 00	0. 32 58
1888-9	63,633	16,598 08	56,910	32,697 00			24,240	15,502 95	144,783	64,798 03	0. 27 29
1889-90	86,068	20,544 93	59,783	22,821 55			31,422	11,085 39	177,273	54,451 87	0. 30 71
1890-1	96,588	20,375 06	61,698	24,386 57			19,004	8,843 92	177,290	53,605 55	0. 30 23
1891-2	75,023	20,592 85	81,993	27,376 08			31,382	12,788 34	188,398	60,757 27	0. 32 249
1892-3	108,035	23,742 26	10,834	18,125 58			66,585	15,112 83	215,454	56,980 67	0. 26 44
1893-4	77,505	21,564 27	59,581	28,664 99			61,536	12,269 24	198,622	62,498 50	0. 31 46
1894-5	59,715	13,630 11	105,463	32,202 70			48,060	10,428 90	213,238	56,261 71	0. 26 38
1895-6	98,905	21,352 63	36,428	15,828 89			36,360	10,299 93	171,693	47,481 45	0. 27 65
1896-7	203,975	34,050 86	81,735	22,080 46			51,078	10,937 62	339,788	67,068 94	0. 19 73
1897-8	187,325	27,611 17	147,085	31,497 57			46,710	10,701 49	381,120	69,810 23	0. 18 31
1898 9	105,058	23,315 82	155,510	36,628 81			51,040	13,283 71	311,608	73,228 34	0. 23 50
1899-1900	176,935	28,232 46	152,033	37,589 22			94,364	17,537 73	422,332	83,359 41	0. 19 76
1900-1	205,369	32,615 29	94,557	36,141 17			26,020	18,984 13	325,946	87,740 59	0. 26 91
1901-2	218,210	28,508 97	143,142	39,247 35			51,320	16,196 95	405,682	83,953 27	0. 20 69
1902-3	197,207	36,195 40	134,648	32,856 93			55,943	16,160 33	387,798	85,212 66	0. 21 97
1903-4	252,725	53,046 12	94,675	34,171 45			49,500	13,775 37	396,900	100,992 94	0. 25 44
Totals	3,375,746	696,024 89	2,894,347	900,574 90	18,005	7,458 03	1,385,771	355,524 85	7,667,879	1,959,579 67	0. 25 55

STATEMENT of Dredging showing Quantities removed by hand in each Province and cost of each Dredging for the Thirty-two Years, ended June 30, 1904.

Fiscal Year.	New Brunswick.		Nova Scotia.		Quebec.		Prince Edward Iseand.		Total Quantity. Cubic Yards	Total Expenditure	Cost per Cubic Yard
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.			
		$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	$ cts.
1878-9			245	555 13					245	555 13	2. 26 58
1879-80			12,370	3,666 90					12,370	3,666 90	0. 29 64
1880-1			11,140	2,560 25					11,140	2,560 25	0. 22 98
1881-2			10,640	2,650 00					10,640	2,650 00	0. 24 90
1882-3			8,190	2,500 00					8,190	2,500 00	0. 30 52
1883-4			5,460	2,500 00					5,460	2,500 00	0. 45 78
1899-1900			343	248 71					343	248 71	0. 72 51
1900-1			320	250 75					320	250 75	0. 78 35
1902-3			1,645	496 38					1,645	496 38	0. 30 17
Totals			50,353	15,428 12					50,353	15,428 12	0. 30 64

STATEMENT of dredging in the Maritime Provinces showing quantities removed by and expenditure of each dredge during the thirty-two years ended June 30, 1904.

Dredge.	TOTAL QUANTITIES AND COST FOR THIRTY-ONE YEARS ENDING JUNE 30, 1903.			1903-1904.			TOTAL FOR THIRTY-TWO YEARS ENDED JUNE 30, 1904.		
	Total Quantity.	Cost.	Per cubic yard.	Quantity.	Cost.	Per cubic yard.	Total Quantity.	Total cost.	Cost per cubic yard.
		$ cts	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
St. Lawrence	1,496,131	390,112 12	0 26 07	54,100	12,767 23	0 24 98	1,547,231	402,879 35	0 26 03
Canada	968,824	304,570 99	0 31 43	33,210	14,797 67	0 44 55	1,002,034	319,368 66	0 31 87
New Dominion	1,559,417	269,812 18	0 17 30	111,175	15,321 04	0 13 78	1,670,592	285,133 22	0 17 06
Prince Edward	1,299,911	334,290 40	0 25 71	49,500	13,775 37	0 27 82	1,349,411	348,065 47	0 25 79
(Old) Cape Breton	534,948	139,074 33	0 25 99				534,938	139,074 23	0 25 99
Geo. McKenzie	688,425	284,930 15	0 41 38	19,150	12,453 20	0 65 82	707,575	297,383 35	0 42 02
Cape Breton	549,785	88,928 90	0 16 17	54,845	18,682 92	0 34 06	604,630	107,611 82	0 17 79
New Brunswick	161,640	10,370 37	0 24 97	77,920	13,195 51	0 46 93	239,560	53,565 88	0 22 36
	7,269,071	1,852,089 14	0 25 51	396,900	100,992 95	0 25 19	7,655,971	1,953,082 08	0 25 51

STATEMENT of dredging performed by hand in the Maritime Provinces showing quantities removed and expenditure at each locality for the thirty-two years ended June 30, 1904.

Locality.	TOTAL QUANTITIES AND COST FOR THIRTY-ONE YEARS ENDING JUNE 30, 1903.			1903 1904.			Total Quantity.	Total cost.	Cost per cubic yard.
	Total Quantity.	Cost.	Per cubic yard.	Quantity.	Cost.	Per cubic yard.			
		$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
Parrsboro, N.S.	42,595	12,804 68	0 30 06				42,595	12,804 68	0 30 06
Windsor, N.S.	5,450	1,627 60	0 29 86				5,450	1,627 60	0 29 86
Milton, N.S.	663	499 46	0 75 33				663	499 46	0 75 33
Racquette, N.S.	1,645	496 38	0 30 17				1,645	496 38	0 30 17
	50,353	15,428 12	0 30 64				50,353	15,428 12	0 30 64

PROVINCE OF QUEBEC.

DREDGING AT BATISCAN RIVER.

Batiscan river is on the north shore of the St. Lawrence, below Three Rivers.

The dredging was continued, during the summer months of 1903, in the eastern channel for a distance of 3,600 feet.

The dredge 'St. Pierre' owned by Mr. Antoine St. Pierre, Three Rivers, resumed dredging, above the Canadian Pacific Railway bridge on June 1, 1903, and discontinued working on October 21.

The dredging was done to four feet at low water, 60,605 cubic yards of clay and sand material were removed.

Expenditure during the fiscal year 1903-04, $5,861.50.

DREDGING AT BEAUHARNOIS.

From July 1 to October 26, 1903, the dredge 'Nithsdale' worked at this place, making two cuts through the shoal, on the west side of the Nun's island, 2,000 feet long, 20 feet wide to a depth of 8 feet at low water ; 22,207 cubic yards of clay and sand were removed.

DREDGING AT CALUMET.

Between October 15 and November 18, 1903, the close of navigation, the dredge 'Little Giant' worked at this place, making a channel from the Ottawa river to Higginson's mill, for the purpose of allowing the logs to be taken in. One cut was made, 1,373 feet long with an average width of 20 feet and 9 feet deep at low water. As the water had lowered to such an extent that the scows could not be utilized, this work was discontinued—6,850 cubic yards of clay and sand were removed.

Work was resumed at this place by the dredge 'T. F. M. No. 1,' on May 23, and continued there up to June 30, 1904, the close of the fiscal year, making one cut along the Canadian Pacific Railway wharf up to the mill, 1,321 feet long, 22 feet wide, and to a depth of 6 feet at low water.—15,400 cubic yards of clay and sand were removed.

One hundred and forty feet of this cut was cast over.

DREDGING IN THE CHAMBLY CANAL.

The dredge 'Richelieu' commenced work at this place on May 21, 1904, in the Little lake at the entrance to the canal, making one cut 45 feet long, 25 feet wide and to a depth of 8½ feet at low water ; 240 cubic yards of clay were removed.

DREDGING AT CHATEAUGUAY BASIN.

From May 28 to June 30, 1904, the close of the fiscal year, the dredge 'Central City' worked at this place. Three cuts were made in front of Durocher's wharf, 250, 150 and 105 feet long, 20 feet wide and 15 feet deep at low water. 5,160 cubic yards of hard-pan and boulders were removed.

DREDGING AT COTEAU LANDING.

The dredge 'No. 4 Daly' worked at this place between August 1 and September 1, 1903, deepening alongside the steel elevator. The depth of water made was 15 feet at low water and the material removed was 7,900 cubic yards of clay.

DREDGING AT DOUCET'S LANDING.

Doucet's Landing is on the south shore of the St. Lawrence, opposite Three Rivers.

The basin contemplated is situated on the eastern side of the wharf which is the terminus of the Arthabasca Railway, belonging to the Grand Trunk Railway Company.

The size of the basin would require to be 400 feet in width by 800 feet in length, so as to allow the steamboats plying at Doucet's Landing to go in, during stormy weather.

During the fiscal year 1903-04, 75,950 cubic yards of clay, sand and a great many boulders have been removed by dredge 'No. 4 Macdonald.'

Total expenditure during the fiscal year, $11,875.15.

DREDGING AT GRAHAM.

Between July 1 and November 19, 1903, the dredge 'T.F.M.No. 1' worked at this place, making a channel from deep water, in the Ottawa river, to Graham's wharf, a distance of 5,000 feet. Three cuts were made to a depth of 8 feet at low water, 4,775, 5,860 and 2,250 feet long respectively. The material removed at this place consisted of 57,200 cubic yards of sand and clay.

Dredge 'No. 4 Cohen' also worked at this place, from May 11 to 13, 1904, making a channel in front of Graham's wharf out to deep water. One cut was made 140 feet long, 25 feet wide and to a depth of 8 feet at low water. 910 cubic yards of clay were removed.

DREDGING AT GRENVILLE.

Work was performed at this place, by the dredge 'Richelieu,' between July 1 and August 25, 1903, making an approach to the new wharf, in front of Dansereau's sawmill. Two cuts were dredged about 500 feet long, 25 feet wide and to a depth of 8 feet at low water. The material removed consisted of 7,425 cubic yards of clay and sand.

DREDGING AT L'ASSOMPTION.

The dredge 'No. 4 Daly' worked at this place, between May 28 and June 30, 1904, the close of the fiscal year. The work consisted of four cuts at the entrance to L'Assomption river, between Bourbon island and Deschamps point, each 842 feet long, 25 feet wide and to a depth of 12 feet at low water.—16,169 cubic yards of clay and stones were removed.

DREDGING AT MONTEBELLO.

Between November 19 and 21, 1903, the close of navigation, the dredge 'Nithsdale' worked at this place, deepening in front of Owen's wharf. The material removed consisted of 297 cubic yards of hard clay and stone.

DREDGING NICOLET RIVER.

The Nicolet empties into the St. Lawrence on its southern shore, at the foot of Lake St. Peter.

The dredge 'Pontiac' owned by the W. J. Poupore Co., of Montreal, commenced dredging at the upper section of the river, on May 15, 1903, and discontinued working on August 29, 1903, the work was resumed on May 16, 1904, and was discontinued on June 22, 1904.

Forty-two thousand three hundred and fifty cubic yards of sand, clay and stone materials were removed during the fiscal year 1903-04.

Expenditure during the fiscal year : $6,079.26.

DREDGING AT NOTRE DAME DE PIERREVILLE.

The dredge 'St. Louis' commenced work at this place on July 1, and continued there up to November 17, 1903, the close of navigation. The work consisted of deepening the channel, between the mouth of the river and the outlet of Hertel channel, making one cut 25 feet wide to a depth of 8 feet at low water ; 19,740 cubic yards of sand were removed.

Operations were resumed by the same dredge at this place, on May 2, and continued there up to June 14, 1904. Making one cut in the channel near the first island, 589 feet long and two other cuts in the Tardiff channel, one 648 feet long and one 377 feet long, all to a width of 25 feet and a depth of 8 feet at low water; 5,895 cubic yards of sand and slabs were removed.

DREDGING AT RIGAUD.

Work was performed at this place, by the dredge 'No. 4 Cohen,' between October 28 and November 18, 1903, the close of navigation, deepening the channel from the Ottawa river into the River LaGraisse, through a sand shoal. One cut was made 22 feet wide to a depth of 10 feet at low water. The material removed was 7,722 cubic yards of sand and clay.

Work was resumed at this place by the dredge 'No. 4 Cohen' on May 14, and continued there up to June 30, 1904, the close of the fiscal year. One cut was made in the Rigaud river, near the Canadian Pacific Railway bridge, 1,459 feet long, 22 feet wide, and 8 feet deep at low water. Another cut was made 61 feet long, 22 feet wide and 8 feet deep at low water. Further work at this upper end of the channel could not be continued on account of high water. Three cuts were made between Seguin's point and McDonald's point, at the lower end of the river, two 782 feet long and one 100 feet long, all to a width of 22 feet and to a depth of 8 feet at low water mark; 19,434 cubic yards of clay and sand were removed.

DREDGING IN THE RIVER JESUS.

From July 1 to October 31, 1903, the dredge 'Otto' worked at this place, deepening the channel from below McDonald's wharf towards the Canadian Pacific Railway bridge at Terrebonne. An approach was also made to the wharf at Lachenaie. The whole of this work was done to a depth of 8 feet at low water. The material removed was 24,890 cubic yards of clay, gravel and small stones.

The dredge 'Otto' also worked at this place, between June 23 and 30, 1904, the close of the fiscal year, making one cut 83 feet long, 21 feet wide and 6 feet deep at low water ; 990 cubic yards of gravel and clay were removed.

DREDGING AT ROBERVAL.

The dredge 'N. V. Savard' worked at the entrance of the harbour of Roberval and on the south side of the wharf between July 1 and October 30, 1903.

The quantity of material removed during the summer was 11,875 cubic yards, which consist of clay and sawdust.

Expenditure, $3,500.

DREDGING AT ST. ANDREWS.

Between August 26 and September 25, 1903, the dredge 'Richelieu' worked at this place, deepening the channel leading to the town wharf; 695 cubic yards of boulders were removed.

Dredging was also performed by the dredge 'Nithsdale' at this place, between October 29 and November 16, 1903, the close of navigation, continuing the work left undone by the dredge 'Richelieu'; 805 cubic yards of boulders were removed.

DREDGING AT ST. ANTOINE.

From June 20 to 30, 1904, the close of the fiscal year, the dredge 'St. Louis' worked at this place, making two cuts in the channel, one 783 feet long and one 909 feet long, both to a width of 25 feet and to a depth of 7 feet at low water; 2,580 cubic yards of sand were removed.

DREDGING AT ST. JEAN DES CHAILLONS.

Between May 16 and June 30, 1904, the close of the fiscal year, the dredge 'Nithsdale' was working at this place, making two cuts between flats, one 300 feet long and one 250 long. Two other cuts were made alongside the docks one 300 feet and one 1,110 feet long. These four cuts were made to a width of 25 feet and to a depth of 7 feet at low water. 10,535 cubic yards of hard-pan, boulders, gravel and clay were removed.

DREDGING AT ST. JOHNS.

Work was commenced at this place by the dredge 'Richelieu,' on September 30, and continued there up to November 21, 1903, the close of navigation. The work done consisted of three cuts, 500 feet long, 22 feet wide and 9 feet deep at low water, in the channel from St. Johns harbour to Iberville wharf, and two cuts about 175 feet long, 22 feet wide and 9 feet deep in the main channel, south of the railway bridge, also removing a boulder shoal close to the draw-bridge. The total quantity of material removed was 9,630 cubic yards of clay, sand and boulders.

DREDGING ST. MAURICE RIVER.

The River St. Maurice flows southward and empties into the St. Lawrence at Three Rivers.

Grandes Piles to la Tuque.—For a distance of 66 miles there is a good channel for vessels drawing less than two feet six inches of water.

The dredging was performed by dredge 'St. Maurice' at Mekinac shoal, on the 14th mile above Grandes Piles. The work was commenced on June 22, 1903, and discontinued on October 15, 1903, during which time 13,702 cubic yards of sand, clay and boulders were removed, making a channel of 40 feet wide for a distance of 2,983 feet.

The stone-lifter with a rock seeker have been working at Grande Anse, on the 37th mile above Grandes Piles, and at Batiscan crossing, on the 44th mile above Grandes Piles.

The stone-lifter was working from June 22 to October 10, 1903, during which time 318 boulders were removed and 33,940 feet of the channel examined.

Expenditure during the fiscal year 1903-04 was $7,768.16.

Eastern Channel.—Some dredging was also done at the outlet of the eastern channel by the dredge 'Duke of York.' The work was commenced on May 22, and discontinued on October 24, 1903. 99,887 cubic yards of sand, clay and boulders were removed.

Expenditure during the fiscal year, $12,954.

DREDGING AT STE. BLAISE.

Between May 28 and June 11, 1904, the dredge 'Richelieu' worked at this place, in the channel opposite the village, making two cuts, one 190 feet long, 25 feet wide and one 505 feet long, 15 feet wide, both cuts were dredged to 7 feet at low water. 4,088 cubic yards of clay and sand were removed.

DREDGING AT VALLEYFIELD.

The dredge 'No. 4 Daly' worked at this place between September 2 and October 28, 1903, making a channel through the bar, about 75 feet wide, 600 feet long to a depth of 13 feet at low water. The material removed consisted of 8,400 cubic yards of sand and stones.

DREDGING AT VILLE MARIE.

The dredge 'Queen' commenced work at this place, on September 23 and continued there up to November 7, 1903, the close of navigation. One cut was made 750 feet long, 25 feet wide, to a depth of 9 feet at low water. Another cut was also made along the front and sides of the piers, 380 feet long, 25 feet wide and 9 feet deep. 9,870 cubic yards of clay were removed.

DREDGING YAMASKA RIVER.

This river takes its rise in the township of Bolton, in the county of Brome. It forms an outlet for several large lakes, and has a course of about 90 miles. It flows through the counties of Brome, Missisiquoi, Rouville, Bagot and St. Hyacinthe, Richelieu and Yamaska, and empties into the head of Lake St. Peter on the southern side, 8 miles below Sorel.

Some dredging was performed by dredge 'No. 4 Macdonald,' from Yamaska lock to the outlet, a distance of about four miles.

Twenty-seven thousand and forty-five yards of clay and sand were removed during the fiscal year 1903-04.

Expenditure during the fiscal year was $6,370.82.

PROVINCE OF ONTARIO.

DREDGING AT BURLINGTON PIERS.

The dredge 'Nipissing' worked at this place from September 15 to November 13, 1903, removing the boulders and other loose material, which had fallen from the piers and obstructing navigation ; 9,340 cubic yards of boulders, stone and sand were removed.

DREDGING AT COLLINGWOOD.

The dredge 'Challenge' worked at this place at Charlton's mill, between July 1 and August 25, 1903, deepening the approach and alongside the wharfs to an average depth of 13 feet at low water. This dredge also worked at the dry dock August 26 and 27, 1903, cleaning off the apron and gate rest. The total amount of material removed was 10,770 cubic yards of hardpan, clay, stone, gravel and boulders.

As the hull of this dredge, as well as the scows, were found to be no longer serviceable in this exposed locality, they were laid up at the docks for the winter and towed to Ottawa in the spring of 1904.

Between June 15 and 30, 1904, work was also performed at this place by the dredge 'No. 7, Coghill.' One cut was made along the southeast side of the mill pond, 536 feet long, 24 feet wide and to a depth of from 8 to 10 feet at low water.

All the material removed was cast over on the new cribwork, and when completed this work will be of a permanent nature.

DREDGING AT FORT WILLIAM.

The entrance channel to the Kaministiquia river has been widened on each side parallel to the range lights. A channel was dredged along the face of the 'Empire Elevators Company's' new dock, in course of construction, and when completed will be 140 feet in width, and to a depth of 22 feet below zero of new gauge.

The channel of the River Kaministiquia, from the Mission river to the Canadian Northern Railway coal docks at West Fort William, was widened and deepened in places where shoals were found.

The total amount of material removed during the past fiscal year from the Kaministiquia river and entrance channel was 373,937 cubic yards, at a cost of $63,388.40.

Total expenditure for the year, $68,892.95.

DREDGING AT GANANOQUE.

Between July 1 and September 18, 1903, the dredge 'No. 4, Cohen' worked at this place, continuing the work of deepening the channel in the river and through the shoal opposite Squaw Point. This dredging was done to an average depth of 9 feet at low water. The material removed consisted of 29,950 cubic yards of saw-dust, clay and sand.

DREDGING AT HAMILTON.

From November 19 to 21, the close of navigation, the dredge 'Nipissing' worked at this place, in the slip for the Hamilton Steamboat Co., but owing to some misunderstanding between the parties interested, the work was ordered to be stopped. The quantity of material removed consisted of 337 cubic yards of mud and sand.

The dredge 'Nipissing' also worked at this place, from May 28 to June 30, 1904, the close of the fiscal year. Five cuts were made in front of Brown's dock and along warehouse. Two cuts were 390 feet long, two 195 feet long, and one 165 feet long. All cuts were made to a width of 27 feet and to a depth of 14 feet at low water. 17,925 cubic yards of clay and sand were removed.

DREDGING AT HAWKESBURY.

From July 1 to August 1, 1903, the dredge 'Little Giant' worked at this place, continuing the deepening of the channel, leading from the Ottawa river to the town wharfs to a depth of 8 feet. One cut was made from below Higginson's wharf to the centre of Cobb island, a distance of 840 feet. 6,270 cubic yards of hardpan and clay were removed.

The dredge 'Little Giant' also worked at this place between May 18 and June 30, 1904, the close of the fiscal year. One cut was made from Higginson's wharf to the end of Cobb island, 1,050 feet long, 28 feet wide and to a depth of 8 feet at low water. 11,495 cubic yards of hardpan, stone and boulders were taken out.

DREDGING AT KINGSTON.

The dredge 'Sir Richard' worked at this place between July 1 and September 14, 1903, on the approach to the Kingston and Pembroke Railway dock, widening and deepening the channel to allow coal and other vessels to reach the dock. A channel was completed about 60 feet wide and to a depth of 14 feet at low water.

The dredge was then taken to Richardson's elevator, and worked there up to October 28, deepening and widening the harbour of refuge, completing the work commenced the previous season. This work was done to a depth of 14 feet at low water.

The plant was then removed to the Rathbun's slip, at Grove-in, a suburb of Kingston, and worked there two days, making one cut in the slip, 160 feet long, 25 feet

wide, to a depth of 9 feet, removing loose boulders and silt. Owing to the low water at that season of the year and the material below 9 feet being solid rock, work was discontinued and the dredge removed to Portsmouth, another suburb of Kingston, and made one cut along the front of Crawford's dock, about 100 feet long to a depth of 9 feet, removing an obstruction consisting of boulders.

This dredge then resumed operations, on the approach to the Kingston and Pembroke Railway dock, and removed an elbow in the channel, to give the vessels a straighter course to the basin. The dredge continued to work there up to November 19, the close of navigation. The total quantity of material removed at Kingston, including Grove-in and Portsmouth, consisted of 46,116 cubic yards of hardpan, clay and boulders.

From June 8 to 30, 1904, the dredge 'Sir Richard' was working at this place making two cuts in front of Davis' dry dock, and running out into the channel, one 350 feet long and the other 450 feet long, 25 feet wide and 10 feet deep at low water. 10,200 cubic yards of hardpan and clay were removed.

DREDGING AT NEWCASTLE.

Dredging was done at this place by the dredge 'Nipissing,' between August 19 and September 10, 1903, dredging one cut from outside the harbour along the east pier, into the elevator wharf, a distance of 1,010 feet, 25 feet wide and 12 feet deep at low water. This work was done to enable grain and coal vessels to reach the elevator. 7,387 cubic yards of sand, stones and mud were removed.

DREDGING AT NEW LISKEARD.

Between July 1 and September 20, 1903, the dredge 'Queen' worked at this place, making an approach to the wharfs. A channel was made at the mouth of the Wabbie river, out to deep water, 25 feet wide and to a depth of 8 feet; removing 15,715 cubic yards of clay and sunken logs.

On June 10, 1904, the dredge 'Queen' resumed operations at this place, and continued up to the close of the fiscal year, continuing the work done last season in the new channel, making one cut 500 feet long, 26 feet wide and to a depth of 9 feet at low water. The material removed at this place consisted of 9,870 cubic yards of clay.

DREDGING IN THE OTTAWA RIVER.

The dredge 'Little Giant' worked at this place, from August 2 to October 15, 1903, deepening the channel leading to the Hawkesbury Lumber Co.'s docks. Two cuts were made, one 750 feet and one 350 feet long, 25 feet wide, to a depth of 8 feet at low water. The material removed consisted of 23,655 cubic yards of hardpan, stone and clay.

DREDGING AT PORT ARTHUR.

The contract awarded to Mr. C. S. Boone, for dredging at Port Arthur, is completed.

The slip between the Canadian Pacific and Canadian Northern Railway wharfs has been dredged to a depth of 20 feet below zero of the new gauge established February last, 1904.

The channel from the entrance of the breakwater to the new Canadian Northern Railway elevator, No. 2, is also completed.

Some dredging was done along the face of the wharf at King's elevator in the fall of 1903, but had to be discontinued on account of construction works by the Canadian Pacific Railway Company at their new storage tank elevator.

The total amount of material removed from the harbour during the fiscal year was 292,154 cubic yards, at a cost of $91,508.92.

Total expenditure for the year, $97,497.49.

DREDGING AT PORT BURWELL.

Between July 17 and September 18, 1903, the dredge 'Ontario' was working at this place, dredging berths for new cribwork, at the outer end of the east pier, to a depth of 21½ feet, also widening and deepening an approach in front of the new wharf, in the inner harbour, at the mouth of Otter creek, to 14 feet at low water. The material removed at this place was 15,070 cubic yards of clay, slabs and logs.

DREDGING AT PORT HOPE.

Work was performed at this place by the dredge 'Nipissing,' between July 1 and August 17, 1903, making two cuts outside the east pier, and three cuts inside of the west pier, approaching the entrance to the new harbour. One cut was also made alongside the dock opposite the sanitary works. All this dredging was done to a depth of 14 feet at low water. The material removed consisted of 21,412 cubic yards of hardpan, stones, sand and mud.

DREDGING AT RONDEAU.

The dredge 'Ontario' worked at this place between July 1 and 16, and September 21, to December 5, 1903, widening and deepening the channel through the bar outside the piers, removing a ridge on the east side of the channel, which leaves a channel through the bar, 175 feet wide out to 17 feet deep at low water. One cut was also made along the east side of the west pier, 325 feet long, 25 feet wide and 17 feet deep at low water. Five cuts were also made on the approach to the Car Ferry dock, to a depth of 17 feet, with a total width of 125 feet, having an average length of 200 feet. The total quantity of material removed at this place was 25,165 cubic yards of sand and clay.

This same dredge also worked at this place between May 28 and June 30, 1904, the close of the fiscal year. One cut was made through the bar, outside of piers, 800 feet long, 25 feet wide, and to a depth of 17 feet at low water. A part of a sunken crib was removed at south end of the piers, leaving 17 feet over it at low water. When not able to work outside or between the piers, owing to rough weather, this dredge worked in the turning basin, at the north end of the piers, in the bay, making 3 cuts, two, 200 feet long and one 175 feet long, all to a width of 25 feet and 17 feet deep at low water. The material removed at this place consisted of 7,065 cubic yards of boulders and sand.

DREDGING AT TRENTON.

The dredge 'Trenton' worked at this place from June 18 to 30, the close of the fiscal year. One cut was made through a mud and stone shoal, to give the channel a straighter course, 2,090 feet long, 30 feet wide and to a depth of 10 feet at low water. 13,680 cubic yards of stone and mud were removed.

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STATEMENT of Expenditure and quantities of material removed by the various Dredges, at different localities, in Ontario and Quebec, during the fiscal year ended June 30, 1904.

Dredge.	Location.	Yards removed.	Character of soil.	Expenditure.	Cost per yard.
				$ cts.	cts.
Challenge	Collingwood	10,770	Hardpan, clay and boulders	3,152 20	29¼
Ontario	Rondeau	32,230	Clay, sand and slabs	7,101 26	15
"	Port Burwell	15,070			
Nipissing	Port Hope	21,412	Harpan, clay, stone, sand and mud	7,570 61	13²
"	Newcastle	7,387			
"	Burlington Piers	9,340			
"	Hamilton	18,262			
Sir Richard	Kingston	56,316	Harpan, boulders and mud	11,221 58	19⁹/₁₀
Queen	New Liskeard	15,785	Clay	8,796 21	34⁷/₂₅
"	Ville Marie	9,870			
Richelieu	Grenville	7,425	Harpan, boulders, clay and sand	6,792 63	30¾
"	St. Andrews	695			
"	St. Johns	9,630			
"	Chambly Canal	240			
"	Ste. Blaise	4,088			
St. Louis	Notre Dame de Pierreville	25,635	Sand and slabs	3,525 79	12½
"	St. Aimé	2,580			
Nightsdale	Beauharnois	22,207	Hardpan, boulders, gravel, clay, stone, sand and sawdust	12,854 57	38
"	St. Andrews	865			
"	Montebello	297			
"	St. Jean des Chaillons	10,535			
T.F.M. No. 1	Graham	57,200	Clay and sand	12,811 45	17¹⁵/₂₀
"	Calumet	15,400			
Little Giant	Hawkesbury	17,765	Hardpan, boulders and clay	12,752 45	26½
"	Ottawa River	23,655			
"	Calumet	6,850			
No. 4 Cohen	Gananoque	29,950	Boulders, gravel, clay, sand, sawdust and slabs	11,711 07	20⅓
"	Rigaud	27,156			
"	Graham	910			
Otto	River Jesus	25,880	Gravel and clay	6,312 00	24⅜
Central City	Chateauguay	5,160	Hardpan and boulders	1,935 00	37½

STATEMENT of Expenditure and quantities of material, &c.—*Concluded.*

Dredge.	Location.	Yards removed.	Character of Soil.	Expenditure.	Cost per yard.
				$ cts.	cts.
No. 4 Daly	Coteau Landing	7,900	Clay, stone and mud	8,183 00	25⅓
"	Valleyfield	8,400			
"	L'Assomption	16,169			
Trenton	Trenton	13,680	Mud and stone	1,860 00	13⅔
No. 7 Coghill	Collingwood		Casting over	1,446 50	

Classification and Quantities of Material removed by Dredges during the Year ended June 30, 1904.

DREDGE 'CHALLENGE'.

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Hard pan	1,760												1,760
Boulders	2,700	100											2,800
Gravel		1,180											1,180
Clay		200											200
Clay and stone	1,480	1,110											2,590
Sand—ordinary		300											300
Sand—very fine		1,940											1,940
Totals	5,940	4,830											10,770

DREDGE 'ONTARIO.'

Boulders												360	360
Clay	4,120	7,365	3,185										14,670
Sand—ordinary	4,870		900	8,820	8,865	1,710					405		31,870
Mud slabs			400										400
Totals	8,990	7,365	4,485	8,820	8,865	1,710					405	360	47,300

DREDGE 'NIPISSING.'

Hard-pan	750	550											1,300
Clay					137½							3,250	3,387
Clay and stone			3,135	2,440	800								6,375
Sand—ordinary		4,112	2,440	2,085	800						750		10,227
Sand very fine	13,687	6,425										13,925	34,037
Mud		875			200								1,070
Totals	11,437	11,962	5,535	4,525	2,017						750	17,175	56,401

CLASSIFICATION AND QUANTITIES of Material removed by Dredge during the Year ended June 30, 1904.

DREDGE 'SIR RICHARD'

Description of Materials Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Hard-pan	8,300	4,916	11,400	8,350	4,950							9,700	47,616
Boulders		300			100								400
Clay	2,800	2,300	500		1,500							500	7,600
Mud				700									700
Totals	11,100	7,516	11,900	9,050	6,550							10,200	56,316

DREDGE 'QUEEN.'

Clay	6,585	5,530	4,375	7,140	1,855							70	25,655

DREDGE 'RICHELIEU.'

Hard-pan			230	4,910	2,060								7,200
Boulders			455	280	1,780								2,525
Clay		805		600							714	1,694	3,813
Sand—ordinary	3,989	2,640									370	1,550	8,540
Totals	3,980	3,445	695	5,190	3,840						1,084	3,244	22,078

DREDGE 'ST. LOUIS.'

Sand—ordinary	4,290	5,130	4,140	3,720	2,460						3,160	3,915	26,815
Slates											1,400		1,400
Totals	4,290	5,130	4,140	3,720	2,460						4,560	3,915	28,215

DREDGE 'NITHSDALE.'

| | | |

Classification and Quantities of Material removed by Dredge during the Year ended June 30, 1904.

DREDGE 'CENTRAL CITY.'

Description of Materials Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds,	Yds.	Yds.	Yds.	Yds.	Yds	Yds.
Hard-pan											200	1,260	4,960
Boulders												200	200
Totals											200	4,460	5,160

DREDGE 'No. 4 DALY.'

Clay												14,220	14,220
Stone		1,540	1,410	4,040							1,430	519	11,939
Mud		6,260	50										6,310
Totals		7,800	1,460	4,040							1,430	14,739	32,469

DREDGE 'TRENTON.'

Mud and stone												13,680	13,680
Totals												13,680	13,680

DREDGE 'CHALLENGE.'

Wages	411 13	406 94	335 65	80 00	29 33	66 67	30 00	29 00		30 00	30 00	110 90	1,559 62
Coal	285 39	312 38	38 15	12 13						15 00		30 00	693 05
Provisions	130 74	128 81	98 20	95 10								5 31	458 16
Stores	55 34	18 50	11 11										84 95
Equipment		2 70											2 70
Repairs	4 27	32 47	10 20							19 05		125 42	192 44
Towage			5 50										5 50
Contingencies	15 84	1 34	5 00		12 15	4 45				10 70		103 33	155 81
Totals	902 71	907 14	503 81	187 23	41 48	71 12	30 00	29 00		71 75	30 00	374 96	3,152 20
Working expenses	898 11	873 67	493 61	187 23	41 48	71 12	30 00	29 00		55 70	30 00	249 54	2,959 79
Repairs, ordinary	1 27	33 47	10 20							19 05		125 42	192 11
Totals	902 71	907 14	503 81	187 23	41 48	71 12	30 00	29 00		71 75	30 00	374 96	3,152 20

DREDGE 'ONTARIO.'

Wages	390 16	399 84	402 04	386 83	390 83	279 32	374 28	155 00	34 84	367 23	433 67	523 12	4,137 16
Coal	106 67	285 84	142 25	138 33	252 24	91 51						84 37	1,101 22
Provisions	120 68	125 30	122 60	119 71	121 00	31 98					220 53		861 80
Stores		24 40		3 35	14 63	4 68						145 69	192 75
Equipment		11 18								10 75		55 68	107 61
Repairs			129 19	82 56				5 75	19 00	77 30	1 00	152 08	466 88
Contingencies			10 00	18 00		63 46		10 85				131 53	233 84
Totals	617 51	876 56	806 09	748 78	778 70	470 95	374 28	171 60	53 84	455 28	655 20	1,092 47	7,101 26
Working expenses	617 51	876 56	676 90	666 22	778 70	470 95	374 28	165 85	34 84	377 98	654 20	940 39	6,634 38
Repairs, ordinary			129 19	82 56				5 75	19 00	77 30	1 00	152 08	466 88
Totals	617 51	876 56	806 09	748 78	778 70	470 95	374 28	171 60	53 84	455 28	655 20	1,092 47	7,101 26

CLASSIFICATION OF DISBURSEMENTS of the Dredges during the Year ended 30th June, 1904.

DREDGE 'NIPISSING.'

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	385 00	378 15	397 60	411 67	385 00	99 33	274 78	428 25	527 76	314 58	305 81	531 90	4,439 83
Coal	234 52	118 75	349 69		219 55	129 38			26 00	30 75	147 60	81 00	1,337 24
Provisions	124 35	119 90	128 10		248 10					69 00	61 58	21 00	772 03
Stores	11 27	15 87	7 75		7 75	5 38		22 59		17 40	24 00	19 64	131 15
Equipment		79 33	7 77	105 70									192 80
Repairs	40 95	15 49	58 95		39 70	2 00			78 97	122 02	20 71	13 36	392 15
Contingencies	38 90	9 12	64 07	16 40	3 25	5 30	24 00	7 62	63 00	18 55	41 33	13 87	305 41
Totals	834 99	736 61	1,013 93	533 77	902 85	241 39	298 78	458 46	695 73	572 30	601 03	680 77	7,570 61
Working expenses	794 04	721 12	954 98	533 77	863 15	239 39	298 78	458 46	616 76	450 28	580 32	667 41	7,178 46
Repairs, ordinary	40 95	15 49	58 95		39 70	2 00			78 97	122 02	20 71	13 36	392 15
Totals	834 99	736 61	1,013 93	533 77	902 85	241 39	298 78	458 46	695 73	572 30	601 03	680 77	7,570 61

DREDGE 'SIR RICHARD.'

Wages	279 52	752 29	521 50	389 40	330 50	147 02	350 29	9 68	125 00	361 70	316 70	661 32	4,244 92
Coal	196 64	225 60	405 40	297 16	6 00			71 34		70 50		100 66	1,373 30
Provisions	153 97	152 81	124 60	214 79							91 26		739 43
Stores	142 57	33 73	29 20		4 78			19 48		26 28	21 22	63 69	340 95
Equipment		155 92	11 17									7 50	174 59
Repairs	434 17	653 52	517 46	84 97	8 65			15 00	29 00	275 12	128 49	193 30	2,339 98
Contingencies	1,438 46	295 63	40 00	5 93	14 80		18 20	21 81			136 70	38 89	2,010 42
Totals	2,645 33	2,269 50	1,649 33	992 25	364 73	147 02	368 49	137 31	154 00	733 90	694 37	1,065 36	11,221 59
Working expenses	2,211 16	1,615 98	1,131 87	907 28	356 08	147 02	368 49	122 31	125 00	458 48	565 88	872 06	8,881 61
Repairs, ordinary	434 17	653 52	517 46	84 97	8 65			15 00	29 40	275 12	128 49	193 30	2,339 98
Totals	2,645 33	2,269 50	1,649 33	992 25	364 73	147 02	368 49	137 31	154 00	733 90	694 37	1,065 36	11,221 59

DREEGE 'QUEEN.'

Wages	465 57	602 27	440 00	440 00	297 34					456 50	663 62	588 70	3,954 00
Coal		156 50	321 00									217 50	695 00
Provisions	134 22	138 87	37 40	135 00	84 90						140 71		671 10
Stores	31 20		8 65	68 10									107 95
Equipment	120 90		27 36								39 00		187 26
Repairs	61 23	88 97	32 40	241 37				19 95	121 42		205 32	130 30	900 96
Contingencies		35 93	954 00		98 00			1,171 96			6 55	13 50	2,279 94
Totals	813 12	1,022 54	1,820 81	884 47	480 24			1,191 91	121 42	456 50	1,055 20	950 00	8,796 21
Working expenses	751 89	933 57	1,788 41	643 10	480 24			1,171 96		456 50	849 88	819 70	7,895 25
Repairs, ordinary	61 23	88 97	32 40	241 37				19 95	121 42		205 32	130 30	900 96
Totals	813 12	1,022 54	1,820 81	884 47	480 24			1,191 91	121 42	456 50	1,055 20	950 00	8,796 21

DREDGE 'RICHELIEU.'

Wages	351 29	365 00	287 50	395 00	378 99			10 58	104 97	232 00	353 60	381 00	2,859 93
Coal		10 01	165 90	221 01	131 63			295 24				720 09	1,543 88
Provisions	113 71	123 00	121 00	123 00	107 00						83 50	102 50	773 71
Stores	2 84	8 05		7 15	1 55						18 46	55 65	94 00
Equipment				4 94	69 00						3 00	3 00	79 94
Repairs	85 40	151 86	42 74	13 75	2 14						67 32	161 74	524 95
Towage	23 00	5 00	10 00	3 15	5 00								46 15
Contingencies	284 80	263 50	264 00		33 10					22 70		4 97	870 07
Totals	861 04	926 42	891 14	768 30	728 41			305 82	104 97	254 70	525 88	1,425 95	6,792 63
Working expenses	775 64	774 56	848 40	754 55	726 27			305 82	104 97	254 70	458 56	1,264 21	6,267 68
Repairs, ordinary	85 40	151 86	42 74	13 75	2 14						67 32	161 74	524 95
Totals	861 04	926 42	891 14	768 30	728 41			305 82	104 97	254 70	525 88	1,425 95	6,792 63

CLASSIFICATION OF DISBURSEMENTS of the Dredges during the Year ended 30th June, 1904 *Continued.*

DREDGE 'ST. LOUIS.'

Items.	July	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	370 00	370 00	370 00	370 00	264 01					293 01	370 00	473 00	2,880 02
Provisions	103 00	103 00	103 00	103 00	66 67			3 00			137 33		619 00
Repairs	4 17											2 40	6 57
Towage									15 00				15 00
Contingencies		1 20	1 00					3 00					5 20
Totals	477 17	474 20	474 00	473 00	330 68			6 00	15 00	293 01	507 33	475 40	3,525 79
Working expenses	473 00	474 20	474 00	473 00	330 68			6 00	15 00	293 01	507 33	473 00	3,519 22
Repairs, ordinary	4 17											2 40	6 57
Totals	477 17	474 20	474 00	473 00	330 68			6 00	15 00	293 01	507 33	475 40	3,525 79

DREDGE 'NITHSDALE.'

Wages	392 00	392 00	392 00	392 00	352 24		40 00				386 93	405 00	2,752 17
Coal				496 67	223 01								719 68
Provisions	113 00	113 00	140 00	113 00	118 97						102 25	110 00	810 12
Stores					69 05								69 05
Repairs	12 70				10 75								23 45
Pilotage		4 00											4 00
Contingencies	1,265 00	1,240 00	1,200 00	1,240 00	1,091 00						1,240 00	1,200 00	8,476 00
Totals	1,782 70	1,749 00	1,732 00	2,241 67	1,865 02		40 00				1,729 18	1,715 00	12,854 57
Working expenses	1,770 90	1,749 00	1,732 00	2,241 67	1,854 27		40 00				1,729 18	1,715 00	12,831 12
Repairs, ordinary	12 70				10 75								23 45
Totals	1,782 70	1,749 00	1,732 00	2,241 67	1,865 02		40 00				1,729 18	1,715 00	12,854 57

DREDGE 'T. F. M. No. 1.'

Wages	66 25	65 00	78 00	67 50	40 00							36 00	78 00	430 75
Contingencies	2,080 00	2,029 85	2,080 00	2,072 00	1,201 85							840 00	2,080 00	12,383 70
Totals	2,146 25	2,094 85	2,158 00	2,139 50	1,241 85							876 00	2,158 00	12,814 45
Working expenses	2,146 25	2,094 85	2,158 00	2,139 50	1,241 85							876 00	2,158 00	12,814 45
Totals	2,146 25	2,094 85	2,158 00	2,139 50	1,241 85							876 00	2,158 00	12,814 45

DREDGE 'LITTLE GIANT.'

Wages	67 50	65 00	65 00	111 00	54 60							30 00		393 10
Towage							136 00							136 00
Contingencies	1,772 00	2,076 00	2,068 00	2,123 35	1,152 00							960 00	2,072 00	12,223 75
Totals	1,839 50	2,141 00	2,133 00	2,234 35	1,206 60		136 00					990 00	2,072 00	12,752 45
Working expenses	1,839 50	2,141 00	2,133 00	2,234 35	1,206 60		136 00					990 00	2,072 00	12,752 45
Totals	1,839 50	2,141 00	2,133 00	2,234 35	1,206 60		136 00					990 00	2,072 00	12,752 45

'DREDGE No. 4 COHEN & SONS.'

Wages	67 50	65 00	38 75	26 67	22 50							93 65	35 00	349 07
Stores													2 50	2 50
Repairs												1 50		1 50
Towage							992 00							992 00
Contingencies		2,050 00	1,544 00	312 00	1,060 00	1,896 00						1,440 00	2,064 00	10,366 00
Totals	67 50	2,115 00	1,582 75	338 67	1,082 50	1,896 00	992 00					1,533 65	2,101 50	11,711 07
Working expenses	67 50	2,115 00	1,582 75	338 67	1,082 50	1,896 00	992 00					1,533 65	2,101 50	11,699 57
Repairs, ordinary												1 50		1 50
Totals	67 50	2,115 00	1,582 75	338 67	1,082 50	1,896 00	992 00					1,535 15	2,102 50	11,711 07

CLASSIFICATION OF DISBURSEMENTS of the Dredges during the Year ended June 30, 1904—*Continued.*

DREDGE 'OTTO.'

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	81 00	81 00	78 00	81 00									321 00
Contingencies	1,620 00	1,560 00	1,332 00	1,227 00								252 00	5,991 00
Totals	1,701 00	1,641 00	1,410 00	1,308 00								252 00	6,312 00
Working expenses	1,701 00	1,641 00	1,410 00	1,308 00								252 00	6,312 00
Totals	1,701 00	1,641 00	1,410 00	1,308 00								252 00	6,312 00

DREDGE 'CENTRAL CITY.'

Wages											9 00	78 00	87 00
Contingencies											200 00	1,648 00	1,848 00
Totals											209 00	1,726 00	1,935 00
Working expenses											209 00	1,726 00	1,935 00
Totals											209 00	1,726 00	1,935 00

DREDGE 'N. 4 DALY.'

Wages	78 00	75 00	72 00						9 00	78 00	312 00
Contingencies	1,908 00	1,924 00	1,924 00						200 00	1,956 00	7,871 00
Totals	1,9 6 00	1,995 00	1,955 50						209 00	2,034 00	8,183 00
Working expenses	1,986 00	1,999 00	1,955 00						209 00	2,034 00	8,183 00
Totals	1,986 00	1,999 00	1,955 00						209 00	2,034 00	8,183 00

DREDGE 'TRENTON.'

Wages											36 00	36 00
Contingencies											1,824 00	1,821 00
Totals											1,860 00	1,860 00
Working expenses											1,860 00	1,860 00
Totals											1,860 00	1,860 00

PROVINCE OF MANITOBA.

DREDGING WHITEMUD RIVER.

The dredge 'Manitoba' operated about the White Mud river, widening and deepening the channel. Thirteen thousand eight hundred and fifty-one cubic yards were removed during the months of July and August, 1903, at the cost of $3,469.70.

The dredge was subsequently moved to the outlet of Lake Francis, where the total excavation, up to June 30, 1904, aggregated 30,822 cubic yards at the cost of $2,982.32. The total quantity of material removed by this dredge during the fiscal year ended June 30, 1904, is 44,653 cubic yards, at the total cost of $6,452.02 or an average cost per cubic yard of a little over 14 cents.

A little difficulty was experienced in starting the work at Lake Francis, as there was no shelter for the plant.

The dredge stood outside during one or two severe storms, but beyond being a little strained, suffered no great damage, and soon made headway enough into the cut to shelter herself.

DREDGING LAKE FRANCIS OUTLET.

The dredge 'Manitoba' and vessels were removed to Lake Francis at the latter end of August, 1903, and the dredging of an entrance into the inner lake was immediately started, between the guide piers, the dredge worked until time came to lay up the plant into winter quarters.

A safe berth was dredged, and the dredge and vessels placed therein for the winter season. Operations were resumed in the spring, 1904. The entrance channel was deepened and widened, and the work of dredging a small turning basin inside was commenced. The total quantity excavated is 30,822 cubic yards at the cost of $2,282.32, or an average per cubic yard of 9⅞ cents.

MANITOBA DREDGES.

Dredge 'Winnipeg.'

The dredge 'Winnipeg's' operations during the season 1903, were confined to dredging the new channel at the mouth of the Red river. The quantity of material moved during that period was 43,230 cubic yards. In 1904, up to June 30, after buoying the channel at the mouth of the Red river, as is customary, the dredge removed some bars that had formed during freshets, and storms, in the old channel, and excavated 11,000 cubic yards, making a total excavation of 54,230 cubic yards removed and dumped into deep water at distances varying from half to one and a half miles.

The total expenditure has been $11,999.76, or an average cost per cubic yard of 22 cents.

The work on the new channel, consists in a cut of an average width of 65 feet, and a depth of 11 feet.

DREDGE VESSEL REPAIRS.

The work of repairing the dredges and plant was proceeded with, and the sum of $7,199.33 was expended during the fiscal year 1903-04.

The dredge 'Manitoba' that had been pretty well battered during one or two storms, was repaired; some new planking was put in, spuds and slides repaired, the dredge re-caulked, and the machinery overhauled. The two scows and the little tug, also underwent the ordinary amount of repairs that is generally required after a season's operations.

The dredge 'Winnipeg' also received an ordinary amount of repairs, but the latter dredge's two scows had to be hauled up and completely gone over, bottom and end planks renewed, recaulked throughout, rollers renewed, &c. The hull of the tug 'Victoria' was also renewed, the old one having become entirely unsafe and water logged, and the boiler intended to replace the tug 'Sir Hector's' boiler, was ordered, so that both dredges 'Winnipeg' and 'Manitoba' were left in a very good and safe working condition.

Classification of Disbursements of the Dredges during the Year ended 30th June, 1904.

DREDGE 'MANITOBA.'

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	1,061 98	734 35	657 37	611 03	80 00	249 25	80 00	93 90			620 75	552 00	4,741 03
Wood						7 94							7 94
Provisions	207 16	15 07	115 25	30 19	81 70	11 05							474 07
Equipment	87 73	132 62									13 65		245 58
Repairs	16 00	75 94	39 74	111 59		222 25	57 16	20 00			13 40	11 83	609 56
Towage		176 00			44 00							33 88	220 00
Contingencies	43 10	86 00	6 45	14 72							3 57		153 84
Totals	1,415 97	1,220 38	818 81	800 53	205 70	490 49	137 16	113 90			651 37	597 71	6,452 02
Working expenses	1,399 97	1,144 44	779 07	655 94	205 70	268 24	80 00	93 90			651 37	563 83	5,842 46
Repairs, ordinary	16 00	75 94	39 74	144 59		222 25	57 16	20 00				33 88	609 56
Totals	1,415 97	1,220 38	818 81	800 53	205 70	490 49	137 16	113 90			651 37	597 71	6,452 02

DREDGE "WINNIPEG."

Items.	July.	August.	September.	October.	November.	December	January.	February.	March.	April.	May.	June.	Grand Totals.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	1,031 94	890 70	789 05	626 48	243 00	84 00	80 00	87 20			686 25	850 30	5,368 89
Coal	797 39	914 81		205 90	603 08						149 76	360 37	3,031 31
Wood	10 25	5 50		8 00	3 50			228 25					255 50
Provisions	259 77	392 51	221 82	163 65	44 55						296 51	184 41	1,563 22
Equipment		36 92	79 50	60 00	27 00						142 36		345 78
Repairs	556 03	79 68	150 81	284 38	49 01			76 67			100 99	32 19	1,329 76
Contingencies	19 00	17 55	10 25	13 75							6 00	38 75	105 30
Totals	2,674 35	2,337 67	1,251 43	1,362 16	970 14	84 00	80 00	392 12			1,381 87	1,466 02	11,999 76
Working expenses	2,118 32	2,257 99	1,100 62	1,077 78	921 13	84 00	80 00	315 45			1,280 88	1,433 83	10,670 00
Repairs, ordinary	556 03	79 68	150 81	284 38	49 01			76 67			100 99	32 19	1,329 76
Totals	2,674 35	2,337 67	1,251 43	1,362 16	970 14	84 00	80 00	392 12			1,381 87	1,466 02	11,999 76

PROVINCE OF BRITISH COLUMBIA.

DREDGING BRITISH COLUMBIA.

This appropriation covers the services of the hydraulic dredge 'King Edward,' dipper dredge 'Mud Lark,' and snag boat 'Samson' when not engaged in any work which there has been a special or local appropriation—such as Victoria harbour—and is supposed to cover work at different points on the Fraser river and elsewhere as may be required. The snag boat's duties consist of removing snags on the Fraser river from the Gulf of Georgia to Chilliwack, or head of navigation—seventy-five miles—surveying, attending to tide gauge on Sand heads, and looking after, repainting and keeping in place for the Department of Marine and Fisheries, the numerous buoys marking the channels at the entrance to the Fraser. Both dredges and snag boat are kept constantly employed for the entire year.

The dredge 'King Edward' was not released from her work in Victoria harbour until the latter part of November, 1903, when she was removed to Langley Slough on the Fraser river for the purpose of opening the slough immediately in front of the town of Langley. Work was begun on December 14, and completed February 26, 1904. Some considerable repairs were required before commencing the work of giving a navigable channel in the North Arm of the Fraser for logs and tugs in the interest of the local mill owners—which work, after a few days deepening in front of the Royal City Mills, was not commenced until April 20, but was carried on continuously until the end of the fiscal year, or June 30, 1904.

The dredge 'Mud Lark' has been steadily engaged on work in Victoria harbour.

The expenditure for the fiscal year 1903-04, on the service of dredging, British Columbia, as represented by the operations of the dredges 'King Edward' and 'Mud Lark,' and snag boat 'Samson' is as follows :—

Dredge 'King Edward'	$19,806 06
Dredge 'Mud Lark'	6,732 17
Snag boat 'Samson'	9,988 47
	$36,526 70

The expenditure of the above vessels are in detail as follows :—

Dredge 'King Edward.'

Wages	$6,643 89	
Provisions	1,738 14	
Material	6,704 82	
Fuel	3,763 00	
Water	14 31	
Tug hire	840 00	
Contingencies	101 90	
		$19,806 06

Dredge 'Mud Lark.'

Wages	$2,365 05	
Provisions	450 25	
Material	3,188 77	
Fuel	722 25	
Water	5 85	
		6,732 17

Snag Boat 'Samson.'

Wages	$6,556 84	
Provisions	1,465 35	
Material	798 16	
Fuel	1,059 00	
Water	71 42	
Contingencies	37 70	
		9,988 47
Total		$36,526 70

DREDGE REPAIRS, BRITISH COLUMBIA.

This service represents ordinary and extraordinary repairs to the dredges 'Mud Lark' and 'King Edward,' and snag boat 'Samson.' The dredge 'Mud Lark' being an old vessel, has taken up the greatest part of the appropriation for repairs.

The expenditure for the fiscal year 1903-04, on repairs for the respective dredges and snag boat, is as follows :—

Dredge 'King Edward.'

Ordinary	$ 210 55	
Extraordinary	915 00	
		$1,125 55

Dredge 'Mud Lark.'

Ordinary	$ 209 04	
Extraordinary	3,597 94	
		3,806 98

Snag Boat 'Samson.'

Ordinary	$ 66 92	
Extraordinary	Nil.	
		66 92
Total		$4,999 45

DRY DOCKS.

The Dominion government owns and operates three dry docks, viz.: the Lorne dry dock at Lévis, in the province of Quebec; the Kingston dry dock, at Kingston, in the province of Ontario; and the Esquimalt dry dock, at Esquimalt, near the city of Victoria, in British Columbia.

LÉVIS DRY DOCK.

This property of the Dominion government has been maintained in an efficient manner during the fiscal year 1903-04, and has been occupied by four vessels during the winter months and for 22 days during the open season.

The expenditure for the fiscal year for maintenance of ordinary repairs was $13,833.54.

ESQUIMALT DRY DOCK.

During the year 1903-04, the dock was occupied 154 days by thirteen vesssels, aggregating 43,028 tons and the dues collected for the above services amounted to $9,844.38.

The only new work done during the year was a complete set of electric light poles fitted around the dock for the incandescent lights, and a new offal scow built.

Besides attending to docking vessels, &c., the staff were employed keeping the whole plant in good order, and ready for service at the shortest notice.

The caisson was placed on the outside berth, chipped (where necessary) cleaned and painted inside, with red lead, and outside with Rabtjen's composition paint, other parts were cleaned and painted, this property is kept in first class condition.

The expenditure during the year 1903-04, was $12,849.45.

KINGSTON DRY DOCK.

During the fiscal year 1903-04, the dock has been kept in good working order with the ordinary care to the machinery and caisson. During the season of navigation the dock was occupied for seventy-three days and ninety-three days in the winter season, the number of vessels accommodated was thirty-six, forming a total tonnage of 23,086 tons. During the fiscal year a building was completed to serve as an office, which had to be rented in previous years.

The expenditures during the last fiscal year amounted to $5,084.33 and the revenue from dues collected was $6,989.36.

RIVIÈRE DU LIÈVRE LOCK.

This lock is situated at Poupore, on the Rivière du Lièvre, 12 miles above Buckingham, in the county of Labelle. It was built to overcome the difficulties of navigating the Little rapid, the dam in connection with it also flooded the Long rapid, 6 miles above, and rendered the river navigable up to the foot of High falls, a total distance of 19½ miles above Buckingham.

Below the last named place, the Lièvre river forms a successsion of rapids and falls, which give extensive water power to a number of saw and pulp mills, over a distance of 3 miles, and the river falls in the Ottawa river, 21 miles below the city of Ottawa. This stretch of navigable water above Buckingham, is an important accom-

modation to the settlers of the upper part of the Rivière du Lièvre, who have no railway communications and it is only of late years that a highway has been built on one side of the river.

The lock and dam were completed in 1892, at a total cost of $233,658.65, they have been kept in good working condition until October 11, 1903, when an extensive land-slide occurrred on the west side of the river, just below the dam. The land-slide covered a distance of about 1½ miles below the dam and a width of about one-quarter of a mile from the river bank, some 200 acres of land under culture were destroyed together with farm houses and outbuildings, the farmers and their families barely escaping with their lives, the accident occurred at 5 o'clock in the morning. The river was completely choked for 6 hours, the water above rose to a height of 15 feet above its original level and then scoured out numerous small channels through the earth filling formed by the land-slide. The upper part of the dam was shoved against the head of water above and 7 feet in height of its top was carried away on a length of 200 feet, the dam is 250 feet long between abutments. Two days after the accident, an officer of the department was ordered to the place with instructions to help as much as possible the carrying on of the traffic.

In a few days, one of the channels through the earth embankment, had been scoured out to a sufficient depth to permit one of the small steamers doing the service on the river to be pulled through it by means of winches, and intended to make the run above the dam, the other steamer remained below. A portage road 1½ miles long was built on the east side of the river to connect its two navigable parts, two freight sheds, 20 x 12 feet, one at each end of the road, were constructed and a contract was awarded to carry the freight and passengers by teams over the portage road.

At its session of 1904, parliament voted an appropriation of $20,000 to be applied towards the reconstruction of the dam, the work has been started.

The amount expended during the fiscal year 1903-04, was $5,517.15.

YAMASKA LOCK AND DAM.

A lock and dam were built in 1886, at Ile a Cardin, on the Yamaska river, 1¾ miles below the village of St. Michel de Yamaska, and about 4½ miles from the mouth of the river, the lock gives a lift of 5¾ feet.

During the fiscal year 1903-04, four lock gates were rebuilt.

The expenditure amounted to $2,611.60.

SLIDES AND BOOMS.

The Dominion government owns and operates slides and boom works, built to facilitate the passage of square timber, round logs, flatted and dimension timber, &c., on the River Ottawa and tributaries, on the lower forty miles or so of the St. Maurice, and in the Trent and Newcastle district, between Fenelon Falls and Heeley's Falls.

In the subjoined reports, the superintending engineers of these river works, Messrs. G. P. Brophy, F. X. Thos. Berlinguet and S. Clegg, give particulars relative to the construction, improvements and repairs carried out under their supervision on government slides, booms, piers, dams, streams, buildings, &c., during the fiscal year, the expenditure incurred for staff, maintenance, improvements, &c., the quantities of the various descriptions of timber that pass through their works, and other information of general interest and utility to lumbermen and the public at large.

REPORT ON THE OTTAWA RIVER WORKS.

(By G. P. Brophy, superintending engineer.)

Ottawa River Works Office,
Ottawa, September 28, 1904.

Eugène D. Lafleur, Esq.,
Acting Chief Engineer,
Department of Public Works of Canada.

Sir,—In accordance with instructions, received in your communication dated June 29 last, I have the honour to submit the following report on the works under my charge, for the fiscal year ended June 30, 1904.

As is the usual custom, the foundations of the various works were examined, at season of low water, and the necessary repairs were done during the autumn and winter months and may be described as follows :—

REPAIRS AT STATIONS ON OTTAWA RIVER (MAIN STREAM).

North Chaudière or Hull.—At this station, a break at the foot of the lower slide was repaired, new sills, sides and flooring were laid for a length of about forty feet, and at the entrance to the slide, the sides, where gouged out, were sheeted with 3-inch plank. At the waste gate, to the west of the slide, a large quantity of saw-logs, drift-wood, &c., was removed, in order to admit of the free regulation of the stop-logs. Two new stop-logs were provided for the waste gate. A portion of the upper slide was also repaired, where the material had worn too thin, a section of 50 feet in length, having been replaced by new timbers. The flooring of this slide was also patched, where found necessary. The guide booms were generally strengthened by new cross fenders and planking. A small supply of timber, suitable for repairs, was purchased for use in case of emergency.

South Chaudière or Ottawa.—At the outlet of the Long slide, a pier was built to lessen the 'pitch-off' at this place. This is a stone-filled crib, covered on top with 3-inch plank and forms an addition to the slide. The pier is 33 feet long, 27 feet wide

and 5 feet high. The stiff guide boom at the foot of the Long slide was overhauled, new timbers, planking, tie-irons and cross-binders having been added to render the boom more serviceable. At the proper season the different guide booms and aprons were disconnected and laid up in winter quarters. As the level of water in the slide and hydraulic channels, is constantly changing, ice had to be cut from the booms, aprons and support piers during the winter to protect these works from damage. At the general storehouse yard, two sheds were built, one 100 feet long, 16 feet wide and 16 feet high to store hoisting crabs, chains and spikes ; the other 46½ feet long, 21½ feet wide and 12 feet high for trucks, carts, heavy irons, &c. These two sheds are sheeted with planed lumber and received three coats of paint. The roofs of the sheds and also those of the two storehouse buildings were covered with three-ply tarred felt paper and gravel.

Chats.—The outlay at this station was for timber, plank and tools for repairs to the glances in the channel, governing dam and slide bulkhead. The sides of the glance piers, in the channel leading to the slide, had become so much worn by passing cribs that the deficiency had to be filled in by new timbers and plank. The dam, on the south side, at the head of the slide, was removed to low water mark for a length of some sixty feet and rebuilt. The crab frame at the lower slide bulkhead was replaced by new material. A supply of timber was also procured for future repairs at this station.

Mountain.—In the spring of 1903, a part of the slide pier, on the west side, at the outlet of the slide, was carried away by high water and had to be replaced. This forms the slide wall of the slide and the portion rebuilt was 40 feet long, 12 feet wide and 8 feet high. The guide boom at the entrance to the slide, weakened by over pressure, was raised and re-inforced by new timbers, held in position by 1-inch screw bolts. A new snubbing post was set in the bank to which the boom was attached by chains. The second bulkhead which was considerably sagged, was levelled to place and new sills were placed on top of the side piers to make a suitable foundation for the posts supporting the cross-stringers.

Calumet.—At the entrance to the third slide the flooring was taken off and three new cross-sills were inserted to take the place of those which were broken.

The apron at the foot of the long slide was taken apart and broken fingers were either renewed or spliced with hardwood plank and screw bolts. The planking on top of the apron was also renewed, and underneath, a cross-sill, carried in proper bearings, was placed to support this structure, at its centre. A section of the side pier of the long slide was rebuilt. This is 136 feet long, 3 feet high and varies in width from 6 feet at the lower end to about 3 feet at the upper end, as the face of the rock is uneven at this point. At different places in the long slide the planking in the bottom was patched and renewed.

Joachim.—The repairs at this station were of a trivial nature and consisted in replacing some missing planks in the bottom of the slide.

TRIBUTARIES OF THE OTTAWA.

Gatineau River.—At this river the tops of the booms were planked with new material and fenders were placed on the piers to protect the corners. During the spring months, ice was cut from around the booms and piers and extra chains and cables were used as a safeguard against excessive pressure from ice and water. As some of the piers, supporting the main boom, are becoming somewhat unserviceable, having been constructed many years ago, repairs of a more extensive character will have to be undertaken shortly, to place these works in thorough state of efficiency. The station house was extended and the old portion re-shingled. The boats and scows were painted and kept in a proper state of repair.

Madawaska River.—At the mouth of the Madawask, two piers, supporting the retaining boom were patched. The top of pier No. 1 (11 feet by 16 feet) in the outside range, was rebuilt for a depth of about 3 feet. New fenders were placed on this pier and also on pier No. 2, outside range.

At Flat rapids two breaks in the face of the flat dam were repaired with 4-inch plank.

At Long rapids a section of the pier dam was rebuilt. The portion repaired is 84 feet long, 12 feet wide and about 4 feet high. As considerable quantity of the stone ballast in this dam was missing, new material was provided to make good the deficiency.

Coulonge River.—At High Falls station the guide boom, at the entrance to the slide, was repaired where damaged and strained by ice shoves last spring. A section of the stiff boom, at the mouth of the slide, was entirely rebuilt. This is 76 feet long, 33 inches wide and 20 inches deep, and forms a feeding platform. The boom is held together by ¾-inch screw bolts and is sheathed in front with 3-inch, maple plank, to prevent excessive wear. Near the head of the slide, a snubbing pier had to be rebuilt from low water line. It is 22 feet long, 16 feet wide and 8 feet high, the east end being sheathed with 3-inch pine plank, to prevent the water leaking through at the rear of the pier. Rock bolts 1¼-inch iron were placed in the solid rock to secure the pier to the bank, which slopes off at this point. Some missing planks were placed on the face of the rolling dam, at the head of the slide. The slide was repaired at different places through its entire length (3,000 feet). Some 575 lineal feet of timber were used in renewing the posts and sills, and 11,000 feet board measure, 3-inch hard maple and oak plank were laid in the slides where the sheeting was defective.

Black River.—The Sheeting in the sides and bottom of the slide at High Falls was patched and renewed where found necessary, and a large number of flat iron bars, fastened with split spikes, were set at the curves where the wear was the greatest. In May, 1904, at a point about 150 feet from the outlet of the slide a break occurred, extending over a distance of 86 feet. This was speedily repaired so that very little delay was occasioned by the accident. Twenty new cross sills, supported on a crib filled with stone, were put in and the new side of the slide was built of solid timber.

Petewawa River.—At Second Chute station, a hole in the main governing dam was repaired. The water was drawn off from the basin above the dam, logs and timber were removed from the hole and the breach was covered with 4-inch plank.

At Third Chute station, iron bars were placed on the faces of the glance piers to protect them from abrasion by passing logs and timber. A number of rocks were blasted to improve the running in the timber channel. A pier 12 feet square was built to strengthen the boom at the north side of the feeding gap; and on the south side, the snubbing pier was shifted up stream to give the guide boom the proper slant to feeding gap. The latter pier is 16 feet square by four courses high.

At Crooked Chute, eighteen pieces of boom timber were purchased for repairs to the boom pier and to the slide at this station.

About half a mile below the outlet of Trout lake, the lower portion, 180 feet in length, of a flat dam was patched. New timbers were laid and 4-inch sheathing placed on the face.

At meno rapids, about 1½ miles above McDougald's slide, a flat dam 30 feet long, and 7 feet face, was built. A pier dam 65 feet long and ten feet high was also repaired at this station. Decayed timbers were removed and replaced by new ones and a quantity of ballast was placed in the pier.

At McDonald's station, a number of the slide posts were renewed and the sheathing was patched. Planking on the face of the governing dam was also renewed.

The large retaining dam at the outlet of Cedar lake had become so much dilapidated, that extensive repairs had to be undertaken, to place this work in serviceable

condition. The bulkhead platform and crab frames, which had been rebuilt more recently, were removed and the piers supporting them were rebuilt. There are three of these piers, forming two sluiceways, or gates. Each pier is 24 feet long, 12 feet wide and 12 feet high above the flooring in the gates. The wing dam at the north end of the bulkhead was rebuilt. This is a pier, filled with stone, 175 feet long, 8 feet wide (except the portion adjacent to the bulkhead pier, which is 13 feet wide at the foundation) and varies in height from 3½ feet at the north end to 8½ feet at the south end. The flooring of the north gateway was relaid, with 8-inch material. The top of the apron, immediately before the flooring in the north gate was rebuilt. This is 8 inches thick and is carried on 12-inch by 12-inch cross-sills. The top of the apron and the sides of the piers in the north gate were covered with ¼-inch iron to protect the exposed surfaces. The sides of the piers in both gates, above the stop-log checks, were sheathed with 6-inch plank to provide the proper glance. Angle irons, 3½ inches by 7 inches by 9-16-inch by 9 feet long, were placed on all the lower corners of the stop-log checks. At the entrance to both gates, eight fenders, 10 feet long, were placed to protect the corners. Eighteen stop-logs, with staple attachments, were provided for the bulkhead. Two piers to support the guide boom were built 205 feet above dam. These are 16 feet square at the base, 10 feet square at the top and 14 feet high, and form a gap 45 feet in width, from which logs are fed to the sluiceway. A course of timber was laid on top of the pier dam forming the south wing, as this structure was too low during the season of high water. The guide booms leading to the sluiceways were overhauled and placed in proper position.

In the spring of 1904 the water in the Petewawa river rose to an exceptionally high pitch, and, in consequence of this, two of the glance piers at the third chute were unable to withstand the extreme pressure and were dislodged. At Crooked Chute the top of a pier supporting the guide boom was carried away and the fastening at the upper end of the boom was torn out.

Dumoine River.—At High Falls station, three piers supporting the main guide boom were repaired by placing 10-inch by 10-inch by 10-feet upright timbers on the sides, and connecting the centre ones by hook bolts of 1-inch iron and ¾-inch chains, with a view of binding the piers together and preventing the side walls from spreading. The guide booms were patched and properly stretched and secured. The sheeting in the sides and bottom of the slide was repaired where found defective. Iron bars were placed at curves in the slide, and at the corners in the bottom, timbers were set to stiffen the structure and protect the side walls. A short distance from the entrance of the slide, where it pasess over a deep gulch, the high bents supporting the superstructure were stiffened by diagonal braces.

Last spring the water in the Ottawa river and its tributaries was unusually high, and during the period covered by this report, remained at a very favourable pitch for log driving operations, and the indications are that all the drives will reach their destination successfully.

The following statement, prepared from information furnished by the collector of revenue in your department, shows the number of pieces of the various descriptions of timber that passed these works and the revenue accrued thereon, during the fiscal year ended June 30, 1904 :—

	Pieces.
Square timber	15,092
Saw-logs	4,314,524
Boom and dimension timber	151,598
Cedars	141,362
Railroad ties	466,124
Fence posts	139,077
Total	5,227,777

Also 13,672 $\frac{31}{100}$ cords pulpwood.

The revenue accrued on the above was $41,756.85.

I have the honour to be, sir,
Your obedient servant,

GEO. P. BROPHY,
Superintending Engineer, Ottawa River Works.

STATEMENT showing Expenditure for Repairs to Works on Ottawa River and Tributaries for fiscal year ended 30th June, 1904.

Name of Station.	Province.	Electoral District.	Expenditure from July 1, to Dec. 30, 1903.	Expenditure from Jan. 1, to June 30, 1904.	Expenditure from July 1, 1903 to June 30, 1904.
Ordinary Repairs—Ottawa River Works.			$ cts.	$ cts.	$ cts.
Ottawa River, Main Stream—					
North Chaudière Station	Quebec	District of Wright	451 46	430 53	881 99
South " "	Ontario.	City of Ottawa	1,635 74	972 76	2,608 50
Chats Station	"	N. Riding Co. Renfrew	3 76	494 60	498 36
Mountain "	Quebec	County of Pontiac		596 57	596 57
Calumet "	"	" "		517 20	517 20
Joachim "	"	" "		14 94	14 94
			2,090 96	3,026 60	5,117 56
Tributaries of Ottawa River—					
Gatineau River	Quebec	District of Wright	114 13	733 14	877 27
Madawaska "	Ontario.	S. Riding of Co. Renfrew		407 01	407 01
Coulonge "	Quebec	County of Pontiac		1,076 17	1,076 17
Black "	"	" "		269 86	269 86
Petewawa "	Ontario.	N. Riding of Co. Renfrew and Nipissing.	3,488 15	2,528 50	6,016 65
Dumoine "	Quebec	County of Pontiac	425 70	553 24	978 94
			4,057 98	5,567 92	9,625 90
Total, Ottawa Riv. Wks.					14,743 46
Ordinary Repairs—Bridges at Ottawa and Roadway and Bridge Approaches between Ottawa and Hull.					
Chaudière Bridge	Ontario.	City of Ottawa.	60 50	243 85	304 35
Union "	" & Quebec	" Dist. of Wright	261 50	165 48	426 98
Hull Slide "	Quebec	District of Wright	16 25	31 12	47 37
Roadway and Bridge Approaches between Ottawa and Hull	Ontario and Quebec	City of Ottawa and District of Wright.	547 92	624 03	1,171 95
Total for bridges, Ottawa			886 17	1,064 48	1,950 65
Extraordinary Repairs—					
Joachim Bridge Approaches	Quebec	County of Pontiac	81 00		81 00
Laurier Bridge Approaches	Ontario.	City of Ottawa	1,965 62	401 06	2,366 68
Dufferin Bridge—Ottawa	"	" "		1,350 00	1,350 00
Total					20,491 79

JOS. KENT,
Acting Accountant.

OTTAWA, September 20, 1904.

REPORT ON THE TRENT AND NEWCASTLE DISTRICT WORKS.

PETERBOROUGH, August 15, 1904.

EUGÈNE D. LAFLEUR, Esq.,
Acting Chief Engineer,
Department of Public Works,
Ottawa, Ont.

SIR,—In compliance with your request in your letter of June 29, 1904, I have the honour to submit the following report on the works under my charge on the Trent river and the water tributary to it, for the year ending June 30, 1904.

These works extend from the Bay of Quinte on the south to Balsam lake on the north.

Healeys Falls.—The works here are in good repair.

Hastings.—The booms were repaired, and some minor repairs were done to the slide.

Otonabee River, near Rice Lake.—Two piers 12 x 16 feet were rebuilt from the water line and filled with stone. These piers are used for attaching booms to, when running the logs out into the lake.

Little Lake Peterborough.—The boom here is about half mile long, there are four anchor piers; the booms were taken off in the fall and placed in winter quarters and replaced in the spring and repaired.

Ketchewannœ Lake.—The boom dividing the lake, making a log and a boat channel from Youngs point to Lakefield, a distance of four and a half miles, has been put in first-class repair, chains and new anchors were renewed where required. This boom was never in better shape.

Burleigh Falls.—The work of building a glance pier 12 x 32 feet above the falls, also a small pier 10 x 10 feet and putting on a stiff boom to guide the logs to the falls and putting in two sets of stop-logs in the dam to contract the water in the channel and improve the channel of logs, has been completed.

Stop-logs were put in the old slide, also new sheathing on the flat dam ; at the old slide some new braces were put in and minor repairs done.

Love Sick Lake.—The boom here is about half mile long, it was overhauled and put in position.

Deer Bay.—The boom here was put in position and some minor repairs done.

Buckhorn.—The work of removing large boulders from the channel was completed. And the side pier at the foot of the slide was sheeted with 3-inch elm plank, some new sheeting was put in the slide, new stop-log posts, and the stiff boom were repaired.

Fenelon Falls.—The booms here were overhauled and put in good order ; a new set of stop-logs in the slide, the repairs to the slide consisted in putting a new set of stop-logs, new planking on the platform and new sheeting. The winch used in sweeping out logs from the eddy was placed in working order.

I have the honour to be, sir,
Your obedient servant,

S. CLEGG,
Superintendent.

REPORT OF THE ST. MAURICE RIVER WORKS.

(By F. X. Thos. Berlinguet, superintending engineer.)

THREE RIVERS, October 10, 1904.

EUGÈNE D. LAFLEUR, Esq.,
Acting Chief Engineer,
Public Works of Canada, Ottawa.

SIR,—I have the honour to submit the following report on the works under my charge on the St. Maurice river and certain of its tributaries, for the fiscal year ended June 30, 1904.

The St. Maurice works were commenced in December, 1851, at Three Rivers. Shawinegan and Grand Mère, and additions thereto, to a limited extent, have been made nearly every year since.

The principal government works extend up the river for a distance of about one hundred and thirty miles from the outlet.

The fluctuation of the water level on the St. Maurice river, during the time of the floating of the logs for the commercial season of 1903, has been fairly good on the main river, but, on many of the tributaries, the duration of the freshets has been too short for the number of logs to be floated, consequently many of the logs were left for the following season.

The following is a statement of the dates of the opening and closing of the booms for the sluicing of the logs at Three Rivers, during the last few years :—

	Number of logs sluiced.
1903—Opening May 28, closing November 13	1,351,587
1902—Opening April 23, closing November 11	1,460,440
1901—Opening June 4, closing November 11	629,982
1900—Opening April 4, closing October 22	864,446
1899—Opening June 3, closing November 18	882,004

At the low water season of 1903, after the drives had passed, the foundations of the various river structures were examined and a commencement made of the necessary repairs and improvements. The work was continued during the closed season of navigation and early spring months, in order that everything would be in readiness for the opening of the commercial season of 1904.

These works may be described as follows :—

Pointe à Trudel booms.—On the 40th mile of the St. Maurice river, 1,412 lineal feet of the booms, also three mooring piers, were examined and put in good condition for the coming season.

Pointe Medeleine booms.—On the 39th mile, 2,588 lineal feet of booms, also ten piers were examined, stone ballast was put in the piers where necessary. A number of boom chains were supplied.

St. Jacques des Piles booms.—On the 38th mile from the outlet, 2,176 lineal feet of 5 to 6 ply booms, also seven mooring piers and two anchor piers were put in good condition. A number of boom chains were supplied. Stone ballast was put in the piers where necessary, and ordinary repairs were made to boats, scows, stationhouse and fences.

Ste. Flore booms.—On the 34th and 35th miles on the St. Maurice, built since 1896, are situated above the sluicing gaps at Grand Mère, to check the floating of

the logs coming in too great quantity for the proper assorting of the logs at Grand Mère. The booms were stretched, for the first time, from creek Sauvageau, to 'Ile Arthur,' in 1898; and from the island to Pte. à Giguère in 1899. 3,997 lineal feet of three ply booms, 1,109 feet of four ply booms, and 202 feet of five ply booms were put in good condition, also ten mooring piers were repaired. A number of boom chains were supplied.

Pointe à Paquin Booms.—On the 33rd mile, 4,238 lineal feet of five and eight-ply booms were stretched in position where four mooring piers and three jam piers are built

Pointe à Trahan booms.—On the western side of the river, on the 33rd mile, 2,400 lineal feet of booms were placed from shore to pier No. 4.

Rapide des Hêtres booms.—On the 26th mile, 600 lineal feet of three and two-ply booms were put in good condition, and the dam closing the eastern channel was raised a few feet and stone-filled.

Pte. A. Bernard booms.—On the 22nd and 23rd mile, two new mooring piers were built and fourteen mooring piers and three jamb piers were put in good condition. A number of boom chains was supplied.

Shawinegan slide.—On the 21st mile, a section of the bottom and sides of the slide were repaired by replacing the worn-out timber and planking with new material, the apron faced with hardwood, and the projecting spikes in the bottom and sides of the slide were countersunk.

Ile aux Toutes booms.—On the 17th mile, 11,805 lineal feet of one to seven-ply booms were put in good condition, and were left stretched for the winter to close the eastern channel above the island and the western channel below the said island. One jamb pier was raised and stone-filled.

Cap aux Corneiles booms.—On the 3rd mile, 1,246 lineal feet of eight-ply booms, 2,614 feet of six-ply booms, 294 feet of five-ply booms, 1,933 feet of four-ply booms and 1,005 feet of two-ply booms were put in good condition, also twenty-five piers were patched at the corners and on the faces where damaged. Posts were renewed, where worn out and decayed.

Cap aux Corneilles western booms, Three Rivers sluicing gates.—On the 2nd mile, a new jamb pier 30 x 40 x 30 feet also 1,400 lineal feet of three-ply booms were built to increase the sluicing of logs by adding more gaps. 108 lineal feet of seven-ply booms, 777 feet of six-ply booms, 402 feet of four-ply booms also seven mooring piers were examined and put in good condition.

1,003,428 logs for Grand'Mère, 354,423 logs for Shawinegan, and 1,351,587 logs for Three Rivers, in all 2,709,438 logs have passed the government works during the season 1903.

Eastern and Ile St. Quentin booms.—At the outlet, 1,070 lineal feet of seven-ply booms, 1,300 feet of six-ply booms, 3,121 feet of five-ply, 4,750 feet of four-ply, 1,851 feet of three-ply booms, and 4,567 lineal feet of two-ply booms, also 43 mooring piers were examined and put in good condition, also the construction of an anchor pier in the eastern channel.

I have the honour to be, sir,
Your obedient servant,

F. X. THOS. BERLINGUET,

BRIDGES AND ROADS.

It may be stated that, in the older provinces of the Dominion, the federal government has confined itself as a rule to take under its exclusive control and make provisions towards the construction and maintenance of important interprovincial road bridges and bridges required across waterways.

In the sparsely settled districts of the North-west Territories, the government of Canada has undertaken to provide for the erection and maintenance of ordinary road bridges over large streams; bridges that are urgently needed to afford uninterrupted communication through trails and highway of national importance, which neither the municipalities to be more immediately benefited by the structures, nor the territorial authorities most directly concerned, could be expected to erect and maintain at their sole expense.

During the last fiscal year works have been executed on the following bridges:—

OTTAWA BRIDGES.

Bridges at Ottawa, and roadway and bridge approaches between Ottawa and Hull.

The roadway of Chaudière bridge, over the south Chaudière slide and hydraulic channels, was cleaned and the rubbish carted off. At the Middle street approach to this bridge,about 15 superficial yards of sand-stone paving were taken up and relaid, as this portion had settled from the proper grade.

The roadway of Union bridge was cleaned as occasion required. The sidewalk on the east side was relaid. Stringers 4 by 10 inches on the lower side, and 3 by 8 inches on the upper side, were laid on the iron floor beams: and upon these stringers were laid two courses of pine plank, the lower being 3 inches and the upper 2 inches thick. The top course of the roadway was relaid with 3-inch hemlock plank.

The roadway of the Hull slide bridge was cleaned at different times when found necessary.

The sidewalk along the causeway leading to Hull, from the stone dam to a point 150 feet westward, was relaid. Cross sills 3 by 6 inches and 3-inch covering were used for this work. The wheel guards, hand-rails, &c., were patched where found defective. The waste water pipes and gutter grates were kept clean, and from time to time, this thoroughfare was cleaned throughout its entire length. At certain places where depressions in the roadway existed, the granite paving blocks were raised and relaid to proper grade.

During the winter months, surplus ice and snow were removed from the sidewalks and roadways of the different bridges and the causeway leading to Hull, for convenience of those having occasion to use these thoroughfares.

Laurier Bridge Approaches, Ottawa.—The approach to the Laurier bridge over the Rideau canal, between Nicholas street and the bridge, was laid with Nepean sandstone paving blocks, the length being about 265 feet. The surface at sub-grade was thoroughly tamped, and the paving was then laid on a bed of sand, the top joints being well grouted with cement mortar. Granolithic sidewalks were also built on this approach, on both sides, from Nicholas street westward, to join those on the bridge.

Dufferin Bridge, Ottawa.—A supply of paving blocks, sufficient to pave the roadway of this bridge has been purchased and these are piled in close proximity to the eastern end of the bridge.

ONTARIO AND QUEBEC.

DES JOACHIMS BRIDGE APPROACHES.

The only outlay chargeable to this work was a payment for the use of a power derrick, when building the retaining walls on the Quebec side of the approach to the interprovincial bridge over the Ottawa, at Rapides des Joachims.

PORTAGE DU FORT BRIDGE.

Portage du Fort is on the north shore of the Ottawa river, in the county of Pontiac, 60 miles, above the city of Ottawa.

At this place an island divides the River Ottawa into two channels, called the North and South channels, the village of Portage du Fort is on the north shore of the North channel.

In the fall of 1901, with contributions from local government of Quebec and Ontario, the department completed a steel bridge across the south channel. The bridge over the north channel was then unsafe for traffic, and it being considered as forming part of the interprovincial bridge uniting the two provinces, the department decided to also renew this bridge with a steel structure of one span 200 feet in length.

In June, 1903, a contract was entered into with Mr. Thomas Moran, of Arnprior, for the construction of the two abutments and approaches on both shores for the sum of $10,797. The contract for the steel work was awarded on August 25, 1903, to the Locomotive & Machine Co., of Montreal, for the sum of $9,750.

The work on the masonry abutments and approaches was started in July, 1903, and at the end of November of that year, the abutments were nearly completed and ready to receive the steel superstructure. The abutments are built U-shape, on a rock foundation, of first class rock faced ashlar masonry, laid in Portland cement mortar of the best quality.

The approaches consist of rip-rap walls sloping one in one on their outer faces filled between with earth, and 24 feet wide at top.

At the end of the fiscal year, the erection of the steel superstructure had not been commenced.

The amount paid to the masonry contractor up to June 30, 1904, was $9,930. Minor repairs to the old bridge, in order to keep it open for traffic pending the construction of the new bridge, the superstructure and contingencies amounted to $820.72, making a total expenditure of $10,750.72, for the year 1903-04.

NORTH-WEST TERRITORIES.

LANGEVIN BRIDGE, CALGARY.

Calgary, district of Alberta, is situated on the Bow river, also on the main line of the Canadian Pacific Railway. The Bow river is crossed here by a Howe Truss bridge of three spans and a trestle approach on the south side.

During the fiscal year 1903-04, the sum of $700 was expended in re-flooring the bridge.

EDMONTON BRIDGE.

Edmonton is situated in Northern Alberta, on the north side of the north branch of the Saskatchewan river, 194 miles north of Calgary.

A bridge was constructed across the Saskatchewan at Edmonton, consisting of three piers and two abutments of concrete, and a steel superstructure. It is a combined railway and traffic bridge, completed in 1900.

During the fiscal year 1903-04, the flooring was renewed at a cost of $1,550.

BATTLE RIVER BRIDGE.

A bridge was built across the Battle river, at Battleford, in 1890 and collapsed in 1900. A steel superstructure was built in 1902, on the old wooden piers.

In the spring of 1904, the water rose to 18 feet above low water, or to within one foot of the lower chords. The strong current undermined the foundation of the north abutment, the sum of $500 was expended on urgent repairs.

HYDROGRAPHIC SURVEY.

RIVER ST. LAWRENCE.

During the fiscal year 1903-04, the main triangulation work between Grondines and Pointe Platon was all completed and the re-triangulation of Lake St. Peter begun, but the latter could not be completed before the winter owing to unfavourable weather and difficulties encountered with.

Gaugings were also recorded at the different gauge stations between Sorel and Pointe Platon until the middle of November last.

The St. Lawrence river was sounded between Lotbinière and Pointe Platon, all but a gap of about two miles between the head and the foot of the Richelieu Rapids. The sounding party was called to winter quarters on October 15 last, as the weather was no more favourable for outdoor work.

Few current observations were also taken.

During winter the entire staff was kept busy plotting the summer work, making water profiles, calculating main triangulation and latitudes and departures, latitudes and longitudes, &c.

In the spring all the working plans were complete and up to date as far as Pointe Platon.

The charts for publication are progressing rapidly and are now ready for the printer as far as Batiscan.

It was only on June 1, 1904, that outdoor work could be begun.

From this date until June 30, the main triangulation staff has reset gauges at four gauge stations between Lotbinière and Pointe Platon and has dressed all the main triangulation stations in this same district for the use of the sounding party. Observations were also made in the vicinity of Grondines in order to tie in the six new lighthouses built by the Department of Marine and Fisheries during the winter.

During June the soundings were also completed in the Richelieu Rapids and quite a few doubtful lines sounded in the preceding fall were sounded over again to ascertain accuracy.

The amount expended during the fiscal year was $281,071.01.

This amount does not comprise stationery, trips of Ottawa officials and the pay of the crew of the 'de Lévis.'

CEMENT LABORATORY,
DEPARTMENT OF PUBLIC WORKS,
August 11, 1904.

E. D. LAFLEUR, Esq.,
Acting Chief Engineer,
Department of Public Works.

SIR,—I have the honour to inclose herewith the annual report of this branch of the department for the year ended June 30, 1904.

I am, sir,
Your obedient servant,

GEO. E. PERLEY,
Engineer in charge.

Since June 30, 1903, all samples submitted to this office have been fully tested and reported upon.

Information has been supplied to the Railways and Canals, Marine Department, Militia Department, also the architects and engineers of the department, contractors and manufacturers.

A crushing machine has been installed in the laboratory and a numebr of 8-inch cubes were made in the laboratory and the elevator in Montreal, the latter were shipped here, a great number have been tested. These cubes were made under varied conditions as will be noted on their respective sheets.

New offices have been fitted up for the general physical and chemical test of cement thus allowing room for crushing machine, and a transverse testing machine for beams of reinforced concrete (20) twenty feet long by (12) twelve inches by (12) twelve inches, this machine will be installed in the old office on a concrete foundation allowing the beams which are manufactured elsewhere being passed through a window by means of an overhead traveller.

The work of this branch has reached such large proportions that another assistant has been called for, from six weeks to three months is required to instruct an assistant in the manipulation of the method of making uniform briquettes, the individual equation playing a very important part in the making of them, it requires one person's whole time, and continual practice and personal ingenuity to bring the briquettes to perfection.

In March of this year the testing laboratories of the United States government were visited and various testing machines were inspected and all the latest methods adopted by the United States were fully investigated thus enabling this laboratory to keep abreast of the times.

The improvement of last year in the methods adopted by the American Society of Civil Engineers has been very satisfactory. It would be well if this method was adopted by the various institutions in Canada. It would minimize the great variation which was found in one cement tested by the various institutions, a law of uniformity might be passed compelling all laboratories to use one and the same method thus eliminating the irregularity.

A number of crushing tests have been made of bricks, mortar, &c., for the architects, also general informations, the engineers of the department have been assisted in the best method to adopt in mixing mortar, concrete, &c., a number of contractors have been assisted in the same manner.

CONCRETE BLOCKS MADE IN THE LABORATORY.

A separate mixture of 1 part Star cement, 2 parts of Chateauguay sand, 5 parts of ½-inch stones and smaller was used for each block. The dimensions of each block are 8″ x 8″ x 8″. They were broken at 12 months old after being treated in the following way:—

1. (A.)—Kept in the Laboratory.

Block Number.	Salt in Water.	Made.	Crushed.	First crack.	Complete disintegration.
	%	1903.	1904.	Tons.	Tons.
1		January 12	January 21	40	90
3		" 13	" 19	86	89
5		" 15	" 18	103	103
7	1	" 19	" 19	72	80
9	2	" 21	" 21	56	71
11	5	" 22	February 3	55	75
13	7	" 23	January 20	82	85
15	10	" 26	" 22	67	86
17	15	" 27	" 18	102	102

(B.)—Made in the laboratory, put immediately outside for 24 hours, then removed from the moulds and kept in the laboratory till broken.

Block Number.	Salt in Water.	Made.	Crushed.	First crack.	Complete disintegration.
	%	1903.	1904.	Tons.	Tons.
2		January 12	January 19	70	71
4		" 13	" 19	77.5	80
8	1	" 19	" 20	50	68
10	2	" 21	" 18	57.5	75
12	5	" 22	" 18	78	88
14	7	" 23	February 3	75	94
16	10	" 26	January 20	61	85
18	15	" 27	February 3	72	89

2. For the following, coal ashes were used instead of stone in the same proportions:— 1, 2, 5.

(A).—Kept in the Laboratory.

Block Number.	Salt in Water.	Made.	Crushed.	First crack.	Complete disintegration.
	%	1903.	1904.	Tons.	Tons.
19		February 6	February 3	43	50
22	1	" 11	" 3	36	68
23	2	" 11	" 3	57	65
24	3	" 13	January 20	37	69
25	5	" 13	" 20	37	64
33	7	" 19	" 21	48	54
34	10	" 19	" 19	55	65

(B.)—Made in the Laboratory, put immediately outside for 24 hours, then taken out of the moulds and kept in the Laboratory till broken.

Block Number.	Salt in water.	Made.	Crushed.	First crack.	Complete disintegration.
	%	1903.	1904.	Tons.	Tons.
20		February 6	February 3	38	53
21		" 9	January 18	59	59
26	1	" 16	" 19	65	67
27	2	" 17	February 3	30	51
28	3	" 17	" 3	41	62
29	5	" 17	" 3	20	53
30	7	" 17	" 3	70	77
31	10	" 18	" 3	41	75
32	15	" 18	" 3	21	61

Blocks made in Montreal and crushed in the Cement Testing Laboratory at Ottawa.

All dimensions 8″ x 8″ x 8″. Crushed 16 months old.

Proportions : 1 Star Cement.
2 Chateauguay Sand.
3 5-½inch crushed limestone, including screenings as out of crusher.

A. (1.)—Kept in office.

Block Number.	Made.	Crushed.	First crack.	Complete disintegration.
	1903.	1904.	Tons.	Tons.
1	January 7	April 7	6	22·5
2	" 7	" 7	6	18
3	" 7	" 7	5	25

(2.)—Kept outside.

4	January 7	April 7	5	27
5	" 7	" 7	25	35

Proportions 2, 2, 5.

(3.)—Kept inside.

6	January 15	April 15	38	51
7	" 15	" 15	35	57
8	" 15	" 15	26	50

(4.)—Kept outside.

9	January 15	April 15	40	74
10	" 15	" 15	39	67

B. The $\frac{1}{2}$-inch stone (same as above) was sifted on a sieve containing 23 holes to an inch and made of wire $\frac{1}{16}$ inch diameter. What was left on the sieve was used for the following samples 50 to 57.

(1.)—Kept in office.

Block Number.	Made.	Crushed.	First crack.	Complete disintegration.
	1903.	1904.	Tons.	Tons.
50	January 23	April 23	28	33
51	" 23	" 23	30	54
52	" 23	" 23	33	58
53	" 23	" 23	32	63
	Kept outside.			
54	January 23	April 23	22	37
55	" 23	" 23	24	44
56	" 23	" 23	22	42
57	" 23	" 23	24	45

2·5 inch crushed limestone as out of crusher.

Mixed without salt in water.

1. (A.)—Kept in office.

Block Number.	Made.	Crushed.	First crack.	Complete disintegration.
	1903.	1904.	Tons.	Tons.
11	January 16	April 16	45	50
12	" 13	" 16	23	51
13	" 13	" 16	34	54

(2.) Mixed, put into moulds in office and put outside immediately; kept outside from January 13, 1903, till date of crushing.

14	January 13	April 13	15	46
15	" 13	" 13	15	41
16	" 13	" 13	15	23

(3). Mixed in office, put into moulds outside (20°) and remained till crushed.

14	January 12	April 12	10	44
15	" 12	" 12	15	40
16	" 12	" 12	26	42

(4). Mixed in office and put immediately outside; frozen once, thawn once, then kept outside.

17	January 12	April 12	25	46
17	" 12	" 12	24	54
18	" 12	" 12	25	36
19	" 12	" 12	20	40

(5.)—Frozen twice, thawn twice, kept outside till crushed.

Block No.	Made.	Crushed.	First Crack.	Complete disintegration.
	1903.	1904.	Tons.	Tons.
20	January 12	April 12	25	41
21	" 12	" 12	22	44
22	" 12	" 12	49	80

(6).—Frozen three times, thawn three times, then kept outside till crushed.

23	January 12	April 12	26	69
24	" 12	" 12	36	62
25	" 12	" 12	20	43

(7.)—Frozen four times, thawn four times, then kept outside till date of being crushed

26	January 16	April 16	35	59
27	" 16	" 16	40	44
28	" 16	" 16	45	48

(8).—Frozen five times, thawn five times then kept outside till crushed.

29	January 16	April 16	36	56
30	" 16	" 16	45	50
31	" 16	" 16	30	34
29°	" 21	" 21	55	64
30°	" 21	" 21	36	50

(B.) Mixed and put into moulds in the office, and kept there for fifteen hours, then put outside in order to be frozen, and inside to be thawed.

(1.) Kept outside.

32	January 20	April 20	70	76
33	" 20	" 20	27	36
34	" 20	" 20	54	81

(2.) Frozen once, thawn once, then kept outside.

35	January 20	April 20	44	93
36	" 20	" 20	39	82
37	" 20	" 20	50	77

(3.) Frozen twice, thawn twice, then kept outside.

38	January 20	April 20	27	62
39	" 20	" 20	45	66
40	" 20	" 20	25	27

(4.) Frozen three times, thawn three times, then kept outside.

41	January 21	April 21	44	61
42	" 21	" 21	30	49
43	" 21	" 21	25	69

(5.) FROZEN four times, thawn four times, then kept outside.

Block Number.	Made.	Crushed.	First crack.	Complete Disintegration.
	1903.	1904.	Tons.	Tons.
44	January 21	April 21	38	51
45	" 21	" 21	19	54
46	" 21	" 21	27	47

(6.) FROZEN five times, thawn five times, then kept outside.

47	January 21	April 21	27	50
48	" 21	" 21	25	50
49	" 21	" 21	50	76

(C.) MIXED WITH SALT AND WATER.

These blocks were mixed and put into moulds in the office, then stored immediately outside till sent to Ottawa. The moulds were taken off the day after; the material used was not frozen at the time of mixing.

PERCENTAGE OF SALT IN WATER BY WEIGHT.

Block Number.	Salt in Water.	Made.	Crushed.	First crack.	Complete disintegration
	%	1903.	1904.	Tons.	Tons.
58	2·0	February 2	May 2	18	51
59	2·0	" 2	" 2	25	68
60	2·0	" 2	" 2	18	49
61	2·0	" 2	" 2	29	51
62	5·0	" 3	" 3	49	75
63	5·0	" 3	" 3	51	60
64	5·0	" 3	" 3	26	77
65	5·0	" 3	" 3	41	75
66	7·5	" 3	" 3	27	60
67	7·5	" 3	" 3	69	85
68	7·5	" 3	" 3	21	49
69	7·5	" 3	" 3	44	61

APPENDIX TO PART IV

REPORT

ON THE

RIVER ST. LAWRENCE SHIP CHANNEL

BETWEEN

MONTREAL AND QUEBEC

PROVINCE OF QUEBEC.

River St. Lawrence Ship Channel,
Ottawa, December 14, 1904.

Sir,—According to your instructions, I beg to present the following annual report on the operations for the improvement of the River St. Lawrence Ship Channel during the fiscal year ended June 30, 1904.

Physical features.
Present navigation.
General information.
History of the work.
Present project.
Cost of Ship Channel to date.
Progress of the dredging operations at the date of writing.
Division I, opened for navigation.
Estimate, 30 foot channel, December, 1904.
Dredges.
General Notes.
Sorel Ship Yard.
Table I. Abstract of operations.
Table II. Classification of Disbursements.
Dredging plant.

I have the honour to be, sir,
Yours obediently,

F. W. COWIE,
Superintending Engineer.

Eugène D. Lafleur, Esq., C.E.,
Acting Chief Engineer,
Department of Public Works, Ottawa.

RIVER ST. LAWRENCE SHIP CHANNEL.

PHYSICAL FEATURES.

The distance between Montreal and Quebec by the River St Lawrence ship channel is 160 miles. Of this distance about 65 per cent is natural deep water not requiring any improvement.

From Montreal to Three Rivers, 82 miles, the tide is not appreciable.

From Three Rivers to Batiscan, 20 miles, the tide can always be felt, but owing to uncertainty of time and height, it cannot be depended upon for navigation.

From Batiscan to Portneuf, 22 miles, during six hours out of every twelve, half-tide giving an additional depth of from 1½ to 4 feet, may be taken advantage of, by passing during those six hours.

From Portneuf to Quebec, 36 miles, there is a tide of from 9 to 15 feet, giving tidal navigation for about nine hours out of every twelve.

The water in the river has a very great annual fluctuation. The average height above ordinary low water is for May, 6½ ft. ; June, 4½ ft. ; July, 3¾ ft. ; August, 1¾ ft. ; September, 1 ft. ; October, ½ ft. ; November, ¾ ft.

The total fall in water level in the river at ordinary low water, between Montreal and Quebec, is about 29 feet.

From Montreal to Three Rivers, 11 ft. ; from Three Rivers to Batiscan, 3½ ft. ; from Batiscan to Portneuf, 10½ ft. ; and from Portneuf to Quebec, 4 ft.

The current varies throughout. It is strongest at St. Mary's Current in Montreal Harbour, at Cap à la Roche, and at the Richelieu Rapids. It is quite gentle in Lake St. Peter.

The general average is about 2½ miles per hour.

The River St. Lawrence between Quebec and Montreal is usually free from ice about April 10, and closed to traffic about November 25, making the season of navigation about 7½ months.

PRESENT NAVIGATION.

Navigation between Quebec and Montreal is still governed by the depth of water, as found from day to day, in the uncompleted portions of the 30 foot ship channel.

At these places there is still a depth of only 27½ feet at ordinary low water, and a minimum width of 300 feet.

In the distance between Montreal and Quebec of 160 statute miles, the length requiring dredging to give 30 feet depth at extreme low water is about 62¼ miles. In all, 42 miles has been completed to 30 feet depth and with the exception of a few miles in the straight reaches of Lake St. Peter, also widened to 450 feet. Except, therefore, in the 20¼ miles yet to be dredged, vessels now run free, at full speed and with perfect safety.

In these completed portions of the channel there is a depth of 30 feet at the extreme low water of 1897, giving nearly 4 feet greater draught for navigation than in the present channel.

The improved channel is being widened to a minimum of 450 feet, and at the bends of from 500 to 750 feet.

The completed sections are being marked with permanent range lights and gas buoys, for the safety of day navigation, and for facilitating navigation by night for

all vessels upward bound as well as light draught coal ships outward.

The division between Sorel and Montreal Harbour has been completed throughout. A vessel now, of no matter how great a tonnage that can pass Lake St. Peter, may proceed with perfect safety to her berth in Montreal. The very largest ships of the Allan and Dominion Lines have this year on several occasions, reached their dock in Montreal after 11 o'clock at night.

It is unfortunate that similar improvements as have been completed between Sorel and the eastern limit of Montreal Harbour, have not yet been made in the channel opposite Longueuil in Montreal Harbour.

During the season of 1904, the water has been exceptionally high, the lowest stage reached during the season of navigation giving a depth of 28′ 1″ in the present, or 27½ foot channel.

The average depth of water available for navigation with the greatest and least depths in each year, from May to November, since 1890, is given in the following table :—

Year.	Average depth for each month, 27½ foot channel.							From Sorel gauge, during each year (May to Nov.)	
	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
1890	35 6	35 3	31 9	30 6	30 9	29 9	30 6	37 0	29 0
1891	34 6	31 3	29 9	29 9	30 0	28 3	28 3	36 9	27 3
1892	31 0	31 9	31 6	30 6	28 9	28 3	28 3	33 6	27 3
1893	36 0	34 3	30 9	29 9	29 6	28 6	28 0	37 6	27 6
1894	34 6	31 9	31 0	29 2	28 3	28 9	29 0	36 0	27 7
1895	33 3	31 3	28 3	28 3	27 6	26 9	26 9	34 6	25 10
1896	33 6	30 6	28 9	28 0	27 6	27 9	29 0	37 0	27 4
1897	35 6	32 6	30 3	29 3	28 0	27 0	27 6	37 0	26 5
1898	31 6	30 9	29 8	28 6	28 2	28 3	28 6	32 1	26 9
1899	36 2	31 9	30 3	28 6	27 6	28 0	27 9	37 9	26 9
1900	33 6	30 9	30 6	29 6	28 1	28 9	29 2	35 9	27 4
1901	34 3	31 10	29 2	28 3	27 7	27 4	27 3	36 3	26 6
1902	33 2	32 2	32 2	29 4	28 1	28 1	29 0	34 1	27 6
1903	32 0	30 11	30 5	29 5	28 4	29 0	27 11	32 8	26 11
1904	36 3	34 5	30 9	29 5	29 5	30 4	29 3	37 4	28 1

GENERAL INFORMATION.

The whole of the ship channel between Longue Pointe, the eastern limit of Montreal Harbour, and Quebec, where dredging has been done or where required, was thoroughly tested or swept during the season of 1904.

A special twin screw steamer, with an efficient staff of engineers, was detailed for this work, and kept busy throughout the entire season.

The problem of sweeping the ship channel thoroughly is a matter of great importance and difficulty. The method of work is to suspend a heavy steel roller 40 feet long under a scow to the required depth, and to sweep along the channel against the current, running parallel lines so as to cover the whole of the ground. In tide water the depth is changing constantly. In fogs or smoky weather the work is interrupted because the shore marks cannot be seen for guidance in running the parallel lines. When there is any sea running the work naturally has to be stopped. As the work is always done in the channel, a great deal of difficulty and interruption is caused by passing vessels. The extent of the work may be inferred from the fact that where the channel is 300 feet wide, eight lines are required to be run, and where the channel is wider it takes from eleven to fifteen lines.

This work, as well as assistance in the carrying out of the dredging operations was carried on under the direction of Mr. V. W. Forneret, C.E., assisted by Mr. N. B. McLean, C.E. The members of the Shipping Federation of Canada, personally inspected the operations of the sweeping of the channel and expressed complete satisfaction at the manner and completeness with which the work was being carried on.

The semaphore at St. Jean des Chaillons was maintained in operation, as usual, from July 1 until the close of the season of navigation. This semaphore indicates the depth of water in the dredged cut at Cap à la Roche.

The semaphore at St. Nicolas was also kept in operation for the same period to indicate the depth of water, from time to time, over the undredged St. Augustin Bar.

In the River St. Lawrence ship channel proper there were during the season of navigation of 1904, only five accidents to ocean going vessels. None of these were in any way due to the channel.

Apart from these, a few minor accidents happened in the harbours of Montreal and Quebec.

The following is a list of the accidents in the ship channel :—

'Bonavista'—Port St. Francis..	At anchor. Struck by passing dredge being towed. Slight damage.
'Cape Breton'—'Canada'—Sorel anchorage..	Collision. Slight damage to 'Cape Breton.' 'Canada,' a passenger river steamer, sunk, with loss of life.
'Vancouver'—Lake St. Peter..	Took sheer and grounded in soft mud outside of channel. Floated after great difficulty by dredging.
'Turret Chief'—Portneuf..	Grounded at night while drawing only 9 feet, outside of channel. Pilot admitted defective eyesight.
'Louisburg'—Champlain..	Grounded outside channel on sand bank. No damage.

During the season of 1904 the total number of ocean going vessels passing up and down the channel was 796, or six less than during the previous season.

The total tonnage for the season amounted to 1,856,697 tons, a decrease from last year of 1¾ per cent.

A feature of the business on the St. Lawrence for 1904, was the large coal traffic between the Nova Scotia mines and Montreal. In all, this trade amounted to 1,401,611 tons, or an average of nearly two steamers per day for every day in the season.

HISTORY OF THE WORK.

Before the commencement of any dredging operations, the depth on the flats of Lake St. Peter was about 11 feet at the ordinary autumn low water of that time.

The actual improvements were commenced in 1844 and continued by the government as a public work until 1846 and abandoned the following year owing to the opposition to the location of the channel.

Legislation was passed in 1850 transferring the plant and authorizing the Montreal Harbour Commissioners to borrow money and proceed with the works as they should deem best.

From 1851 to 1888 all operations for the improvement of the St. Lawrence between Montreal and Quebec, were carried on by the Montreal Harbour Commissioners, the interest on the cost of the work being defrayed by a tonnage tax on all vessels drawing 10 feet and upwards.

In 1888 the channel from Montreal to Cap à la Roche was completed to 27½ feet at ordinary low water, and from there to Quebec 27½ feet at half tide.

The government decided in 1888 to re-adopt the River St. Lawrence ship channel as a public work.

Under the Public Works Department, from 1888 until 1898 the work begun by the Harbour Commissioners was continued.

The difficult rock work at Cap à la Roche and Cap Charles, was completed as designed.

Almost all of the dredged portions of the river, except the channel in Lake St. Peter, were cleaned up or deepened, and many curves and narrow places were widened.

Surveys were made, and between Cap Charles and Quebec, to avoid the necessity of waiting for the tide, channels were dredged through several shoals.

The extraordinary low water of 1895 and 1897, and the increase in the size of vessels, urgently called for a wider and deeper channel.

In 1897 it was decided to construct new plant consisting of large and powerful dredges, tugs, barges, &c., suitable for channel improvement on a large scale.

PRESENT PROJECT.

In 1899 the dredging plant was in a position to warrant the commencement of a more extensive plan of operations; and as two new dredges of a large type, with tugs and plant had proved their efficiency, two powerful steel dredges designed according to the best practice and experience in this identical work, with tugs, &c., were almost completed and two more, to complete the six required, were authorized.

With a proper dredging fleet assured, and the necessary shops and ship yard at Sorel available, the work of the 30-foot channel was undertaken.

The low water of 1897, the lowest on record, except the short period of extraordinary low water of 1895, was adopted as the plane of river level at which the channel would be made 30 feet in depth.

It was also decided to make the channel as wide as could be dredged in one cut, viz., 450 feet.

The present object of the dredging operations is to obtain in the shortest possible time a ship channel between Montreal and Quebec for safe 30-foot navigation.

The minimum width for the tangents has been fixed at 450 feet, but the bends are widened out to from 500 to even 750 feet. The dredging is being done to give a clear depth of 30 feet at the E.L.W. of 1897.

The navigable depth in this channel as being dredged, during the season of 1904, was as follows :—

May.	June.	July.	Aug.	Sept.	Oct.	Nov.
39′ 11″	38′ 1″	34′ 5″	33′ 1″	33′ 1″	34′ 0″	32′ 11″

The greatest depth from May to November was 41′ 0″ and the least, at the end of November, 31′ 9″.

The total distance between Montreal and Quebec is 160 miles. The length requiring dredging between Longue Pointe, the eastern limit of Montreal Harbour, and Quebec Harbour, is about 62¼ miles.

COST OF SHIP CHANNEL TO DATE.

TABLE showing the Total Cost of the Dredging and Plant, and the Quantities Dredged up to June 30, 1904.

	Cost of Dredging.	Expenditure for plant, shops, surveys, &c.	Quantities dredged.
Montreal Harbour Commissioners—1851 to 1888.	$ cts.	$ cts.	Cubic yards.
Dredging Montreal to Cap à la Roche to 27½ feet at ordinary low water, and from Cap à la Roche to Quebec to 27½ feet at half tide	3,402,494 35	534,809 65	19,865,693
Department of Public Works.			
Dredging consisting of widening and cleaning up of channel; deepening Cap à la Roche to Cap Charles to 27½ feet at ordinary low water and dredging at Grondines, Lotbinière, and Ste. Croix—1889 to June 30, 1899	829,583 08	486,971 79	3,558,733
Present Project:—Dredging channel between Montreal and Quebec to 30 feet at lowest water of 1897; also widening to a minimum width of 450 feet and straightening—			
Fiscal year 1899-1900	100,191 01	265,270 78	1,107,894
" 1900-01	136,680 83	287,040 04	2,479,385
" 1901-02	185,429 80	479,731 47	3,098,350
" 1902-03	255,776 55	277,703 50	6,544,605
" 1903-04	276,958 59	308,765 44	4,619,260
	5,187,114 21	2,640,292 67	41,273,920

PROGRESS of the Dredging Operations at the date of writing, the close of the season of 1904.

Locality.	Total Length Requiring Dredging.	Length Dredged in 1904.	Total Length of 30 Feet Channel Dredged.	Length yet to be Dredged.
	Miles.	Miles.	Miles.	Miles.
Division 1:— Montreal Harbour to Sorel	21·80		21·80	
Division 2:— Sorel to Bastican	12·45	3·10	8·00	4·45
Division 3:— Lake St. Peter	18·00	1·80	7·70 / 43·60	6·70
Division 4:— Bastican to Quebec	10·00		0·90	9·10
	62·25	4·90	42·00	20·25

* Not widened. † Widened.

From Batiscan to Quebec the tide is available, and by taking advantage of it, vessels of heavier draught may pass.

During the summer of 1903 the practical completion of Division I. was announced. This gives a channel between Sorel anchorage and Longue Pointe, the eastern limit of Montreal Harbour, of a depth of 30 feet at the extreme low water level reached in 1897, and having a minimum width of 450 feet.

In the 40 miles of navigation between these two points there are now but sixteen tangents, joined by easy curves where the channel is widened to from 500 to 750 feet.

DIVISION I. OPENED FOR NAVIGATION.

In the month of October, 1903, the dredging in Division I. having been practically completed, and the work thoroughly tested, it remained for the Department of Marine and Fisheries to give the necessary aids to navigation so as to make the improved highway fully available.

In anticipation, this department had early in the season reported on the position and character of the lighthouses that would be required to permanently mark the channel as soon as completed.

On November 1 the lighthouses were put in operation, and gas buoys were placed to mark the bends and narrow places.

The benefit to navigation was immediately apparent. In the month of November, when time was of great value, several large ships, instead of anchoring at Sorel, took advantage of the improved and well marked channel and proceeded to Montreal safely making their docks before midnight.

It is not expected that the large transatlantic ships outward bound will sail from Montreal during the night. The time for sailing for these large vessels is usually fixed in advance. Coal ships, however, and other vessels of light draught, will be able to sail from Montreal in clear weather at any time when they are ready. Inward bound ships will be able to avail themselves of the improvements throughout the channel as soon as completed.

The utility of the work done on the River St. Lawrence is evident. Advantage of every improvement is immediately taken, and at the present time several very large ships are being built with a view to the expected increased accomodation.

ESTIMATE, 30 Foot Channel, December, 1904.—Montreal Harbour to Quebec.

Locality.	Length of Dredging.		Cubic yards yet required to be done.
	Required.	Done.	
	Miles.	Miles.	
Division 1 :—			
Longue Pte. to Pte. aux Trembles (en haut)		5·05	
Ile Ste. Thérèse		0·40	
Varennes to Cap St. Michel		3·00	
Cap St. Michel to Verchères		4·50	
Verchères Traverse		1·10	
Verchères to Contrecœur		1·70	
Contrecœur Channel		6·05	
Total		21·80	

ESTIMATE, 30 Foot Channel, December, 1904—Montreal Harbour to Quebec—*Concluded.*

Locality.	Length of Dredging.		Cubic yards yet required to be done.
	Required.	Done.	
	Miles.	Miles.	
Division 2:—			
Sorel to Ile de Grace	0·80	3·60	350,000
Stone Island	.....	1·10	
Ile au Raisin	0·25	.....	40,000
Lake St. Peter (see 3)	.....	.....	
Port St. Francis	0·15	0·35	70,000
Three Rivers	.....	0·50	
Cap Madeleine to Becancour	1·55	.....	620,000
Becancour to Champlain	0·50	1·75	200,000
Champlain to Pte. Citrouille	0·60	0·70	400,000
Batture Perron	0·60	.....	450,000
Total	4·45	8·00	2,130,000
Division 3:—			
Lake St. Peter	6·70	*7·70 †3·60	13,000,000
Total	6·70	11·30	13,000,000
Division 4:—			
Batiscan to Cap Levraut	3·00	.....	1,300,000
Cap à la Roche Channel	2·00	.....	1,200,000
Pouillier Rayer	1·20	.....	500,000
Cap Charles	0·90	.....	500,000
Grondines	0·80	.....	200,000
Lotbinière	.....	0·40	
Cap Santé	.....	0·20	
Ste. Croix	0·60	0·30	150,000
St. Augustin	0·60	.....	150,000
Total	9·10	0·90	4,000,000
Totals	20·25	42·00	19,130,000

*Not widened. †Widened.

DREDGES.

Laval.—Of the fleet of ship channel dredges, this is the oldest. The hull is of wood, constructed in Ottawa in 1894. The buckets are made of cast steel for work in rock and other hard material.

During the winter 1903-04, the above water parts of the hull, the timbers and 'A' frames were rebuilt at the government ship yard at Sorel.

The details of the operations of this dredge for the fiscal year were as follows :—

On July 1, 1903, the *Laval* was engaged in cleaning up the slight filling in of sand, which occurs only at Champlain. This was completed on July 3.

The dredge was then taken to Pointe aux Trembles (en haut) to work on the Longue Pointe curve. The material, a mixture of black sand and stiff clay with embedded stones, was very difficult and on November 20, the dredge was completely used up and had to be taken to winter quarters for a thorough overhaul.

Owing to the extent of the repairs, and the rebuilding, the *Laval* was not ready in 1904, until June 8, when she was taken to work at the widening and straightening of the channel between Becancour and Ile Bigot, where she continued until the end of the fiscal year.

Considering the difficult material, and the state of the machinery, the *Laval* made satisfactory progress. In the total of 141 days, during which this dredge was at work, her machinery was in actual operation 67 per cent of the full working time.

The total quantity dredged amounted to 217,150 cubic yards, at a cost of $32,615.17 or $15\frac{91}{100}$ cents per yard.

Laurier.—The hull of this dredge is also of wood, having been constructed at the government works at Sorel, in 1897. Her buckets were of large size built up from cast steel bottoms, for working in soft material. As almost all the work in soft material was completed, the buckets were changed during the winter of 1903-04, and replaced by smaller and stronger buckets, having sufficient teeth for working in hard-pan, &c.

From July 1903, until September 24, the *Laurier* worked near Pointe aux Trembles (en haut) on the Longue Pointe traverse and curve. The material was sticky black sand mixed with clay and gravel, and very tough.

From September 24, until the end of the season, the work was at the channel between Sorel and Ile de Grâce, where the material was soft clay, the vessel going into winter quarters on November 26.

In 1904, the *Laurier* with a complete set of new buckets went into commission on April 28. Her first work was some cleaning up at Cap St. Michel, and Pointe aux Trembles (en haut), and on May 24 she was taken to Port St. Francis where she worked at Force Shoal, in hard clay, stones, and embedded boulders, until the end of the fiscal year.

The number of days during which this dredge was in operation was 180, including the bad weather periods, and the percentage of time at actual work, 57 per cent.

During the fiscal year the dredge removed 317,950 cubic yards at a total cost of $35,883.24 or $11\frac{28}{100}$ cents per yard.

Lady Aberdeen.—The hull of this dredge is of steel, the vessel complete, having been constructed at the Sorel works in 1900. The buckets were originally designed for working in soft material, and during the winter 1903-04, they were replaced by a complete new set of cast-steel buckets especially designed for working in rock or other hard material.

At the commencement of the fiscal year, this dredge was working at Contrecœur, in soft clay, continuing until its completion on September 8. The dredge then worked on the channel between Sorel and Ile de Grace, also in soft clay, until the close of the season, November 26.

In 1904, after leaving winter quarters on May 3, the *Lady Aberdeen* worked for a few days on the Pointe aux Trembles channel, near Longue Point . After the completion of this work on May 24, the dredge was taken to Port St. Francis, where she continued working in the very hard material found at Iron Shoal, until the end of the fiscal year.

During the year, this dredge was at work for 176 days, with the machinery in actual operation for 68 per cent of the full working time.

The total number of cubic yards removed amounted to 649,400 at a cost of $35,827.24 or $5\frac{51}{100}$ cents per yard.

Lady Minto.—This dredge is of exactly the same type and design as the *Lady Aberdeen*. Until the close of the season of 1903, her buckets were for working in soft material. During the winter these were replaced by a complete new set of cast-steel buckets for working in rock and the hard material now found, below Lake St. Peter.

From the beginning of the fiscal year until September 3, this dredge worked at Contrecœur, the material removed being soft clay and stones. From September 3, until November 7, the work was at Port St. Francis, on the difficult dredging of Force Shoal, where in addition to the hard character of the work, and the exposed position, a great deal of time was lost while large boulders were being lifted by a stone lifter.

The remainder of the season, until the dredge went into winter quarters on November 24, was spent on the Pointe aux Trembles (en haut) channel.

On the opening of the season of 1904, this dredge was taken to St. Denis and River Saguenay where she was still working at the close of the fiscal year.

As the dredge only worked on the ship channel during the first half of the fiscal year, the working time amounted to 124 days, during which period the dredge was actually working 54 per cent of the full time.

The quantity dredged amounted to 306,340 cubic yards, and the cost amounted to $37,002.17, or $12\frac{07}{100}$ cents per yard.

Lafontaine.—This vessel is probably the best dredger of her type in the world. The hull is of wood, the work of the Sorel ship yard, and completed in 1901. With large but very strong buckets, she again holds the record of the elevator fleet, for the number of yards removed during the fiscal year, being again under the charge of Captain Albert Marcotte and engineer Johnny Matte.

From the commencement of the fiscal year until September 12, the *Lafontaine* worked at Contrecœur in compact blue clay. She then worked at the foot of Lake St. Peter on Nicolet Traverse until October 28, and from that date until November 25, when she went into winter quarters, she worked at cleaning up some imperfect banks and lumps found by testing.

On the opening of the season of 1904, this dredge commenced operations on April 28, between Vercheres and Cap St. Michel, widening the channel during high water. On completing this work on May 19, she was taken back to the work at Nicolet Traverse continuing until the close of the fiscal year.

The working time of the *Lafontaine* was 178 days, the dredge being in actual operation 57 per cent of the full working time.

The total number of cubic yards removed amounted to 752,400, at a total cost of $36,143.92, or $4\frac{81}{100}$ cents per yard.

Baldwin.—This is the newest vessel of the elevator dredge fleet. The hull is of wood, constructed at the Sorel shipyard in 1902.

From the commencement of the fiscal year until November 4, the *Baldwin* worked at Pointe aux Trembles (en haut) in exceedingly tough and difficult material consisting of cemented black sand with embedded stones. Early in November the dredge was completely used up, and she was taken to Sorel for a thorough repair.

During the winter the buckets were rebuilt and strengthened, and the dredge was only ready for operations in 1904 on May 28.

Work commenced at Becancour, also, in very hard material consisting of hardpan and embedded boulders, and continued until the end of the fiscal year.

This dredge under the charge of Captain Louis Dauphinais, and engineer F. Beaulac worked very steadily for the time at work, and considering the character of the material. Owing to the heavy repairs in the spring and autumn, the year was short, the working time being only 136 days, during which period the dredge actually worked 75 per cent of the full time.

The total number of cubic yards dredged amounted to 320,880 at a cost of $36,959.23, or $11\frac{51}{100}$ cents per yard.

J. Israel Tarte.—This hydraulic dredge is the newest machine of the ship channel dredging fleet, and a new departure as regards plant for the improvement of navigation in Canada. Constructed by the Polson Iron Works Company, of Toronto, Canada, and designed under the supervision of the Chief Engineer and Superintendent of Dredging for the Public Works Department, by Mr. A. W. Robinson, M. E., of Montreal, the features and results of this dredge are of wide-spread interest.

The hull is of steel, of the same type and general design as the steel hulls of the elevator dredges.

The vessel is not self-propelling. She is moved and attended by tugs. The operations of dredging and methods of manoeuvering are precisely the same as those of the

elevator fleet. The vessel is held in position and moved for feeding by six anchors, one forward, one aft, and two on each side. The cut or furrow is taken, commencing at one side of the channel, and by the side winches hauling the dredge across to the other side, then advancing 2 to 6 feet according to the material, recrossing. Any ridges that may be left between cuts or furrows, are narrow. They cannot be found by the lead and in the soft material would not inconvenience a vessel in any way. The current also tends to level the dredged bottom.

The bow anchor is attached to a wire cable at least half a mile long, as in moving it, the dredge has to be stopped.

Work commences at midnight, Sunday, and if nothing happens continues until 6 o'clock p.m., on Saturday.

On account of the difficulty in making an absolute clean cut, at least two feet, usually more, is allowed, in order to assure safety from the ridges.

The quantities are calculated by taking winter soundings, and by obtaining the depth after dredging by the testing scow, and the advance from instrumental positions. The cubic quantities *in situ*, are increased 25 per cent to give results as scow measurement, on which basis all other work is calculated.

The material is discharged through a 36 inch pipe, floated on steel pontoons. This discharge pipe is connected by a swivel-elbow with the dredge, and the discharged end is moored to a steam scow held by two anchors. The curve of the pipe and the swing of the steam scow, allows for the motion of the dredge across the 450 foot channel. The discharge pipe is about 2,000 feet long, and the material is deposited as nearly as possible 1,500 feet from the edge of the channel, and on the side where the current will tend to carry the suspended matter further away.

Two tugs are generally required, one with a day crew, and the other for both day and night

The material in the bottom is first attacked by a revolving cutter on the end of the suction pipe. This cutter is driven by an independent engine. It not only cuts the material but starts it towards the inlet, and although the suction pipe is 80 feet long, heavy material, small stones, buoy anchors, &c., are sucked up with regularity.

The power for the main pump is derived from a triple expansion marine engine.

The boilers, of which four were originally put in, were of the locomotive type. From the commencement of the work, difficulty was had with the boilers. Finally in November, 1903, one of them exploded resulting in loss of life, and disabling the dredge for nearly eleven months. Four new marine boilers were put in, and have proved their efficiency and capacity.

Throughout the dredge, machinery and discharge connections, extensive alterations have to be made, and the vessel as she now stands is greatly changed from the plant which originally started work. It is now hoped that good steady work may be accomplished, and new records made.

During the month of September, 1903, dredge *J. Israel Tarte* easily made the world's record for one month's dredging. In 25 working days the dredge was in actual operation 83 per cent of the full working time of 132 hours per week, and removed 750,100 cubic yards scow measurement. These results were calculated from actual measured cross sections, and by adding to the quantity *in situ*, 25 per cent, to make scow measurement. This made over 30,000 cubic yards per working day or 1,650 yards per hour of actual work.

The dredge *J. Israel Tarte* was disabled on November 3, 1903, by a disastrous accident to one of her boilers.

The wages for the officers and crews of the dredge and attending plant, including board, amounts to about $3,000 per month. This includes the salary of a mechanical engineer.

The cost of the steam coal (bituminous) delivered on board the dredge is about $4 per ton of 2,000 lbs.

A dredge of the *Tarte* type gives extraordinary results if her machinery can be kept going. Except for breakdowns the delays are very few.

The dredging machinery proper, the cutter, and the hydraulic machinery have proved themselves to be wonderfully well adapted both in design and construction for the work.

We have learned by experience that for hull, main engines, steam piping, and boilers, English practice of reserved strength and power, to avoid forcing to the utmost, is necessary to avoid breakdowns.

During the fiscal year the *J. Israel Tarte* worked only from July 1, to November 3, the dredge being disabled for the remainder of the working season. In the 106 days, the dredge was in actual operation for 69 per cent of the full working time.

The total number of cubic yards removed amounted to 2,055,140 at a cost of $62,527.62, or an average of $3\frac{4}{100}$ cents per yard.

General Notes.

The plant available consisted of six elevator dredges, one hydraulic dredge, six tugs, and two staff and sweeping steamers. There was also a stone lifter, three coal barges, and the necessary hopper scows, boarding scows, which scows and the testing scow.

The constant heavy work day and night is very hard on the machinery, and all the dredges were stopped from time to time, for shafts worn out, tumblers broken and especially for buckets broken.

The hopper scows also caused more delay and trouble than usual owing to wear and tear caused by the heavy material and heavy work.

The elevator dredges ordinarily work from 12 a.m. Monday until 6 p.m. Saturday, 20 hours per day, or 115 hours per week.

Two full crews work in ten hour shifts, changing at noon and at midnight. Day and night work is not as economical as day work only, especially in dredging, as coaling and repairs stop the work.

In making up the cost of the work of dredging everything is included, except interest on the capital expenditure and depreciation. The principal items of cost are, wages, fuel, board, stores, repairs, superintendence and engineering expenses. The item of repairs includes keeping the plant in constant good repair. The cost of operating an elevator dredge with its attendant plant amounts to about $32,000 per annum. The cost of operating the hydraulic dredge will amount to about $60,000 per annum.

The total cost of the dredging operations on the ship channel for the fiscal year was $276,958.59, and the total number of cubic yards dredged 4,619,260, making the cost per yard $5\frac{99}{100}$ cents.

By Order in Council of March 11, 1904, on a report from the Right Honourable the President of the Privy Council, with a view to systematizing and facilitating the work: the hydrographic surveys, the management and control of the river St. Lawrence ship channel together with the dredging and ship-building plant, were transferred at the close of the fiscal year to the Department of Marine and Fisheries, so as to place the supervision of the improvements to navigation on the St. Lawrence route under the department directly responsible for the Pilotage and Aids to Navigation.

The following tables show in a concise form the details of the operations of the different dredges, the classification of the expenditure, the cost per yard in each locality, and the expenditure at Sorel in connection with new plant and the shipyard generally.

SOREL SHIP YARD.

The following are the chief items of work done at the Sorel Ship Yard during the fiscal year as reported by Mr. G. J. Desbarats, Director of Ship Yard.

New Construction.

The new construction underway during the year was as follows:—

Dredge *W. S. Fielding.*—The construction of this dredge was advanced during the year. The plating of the deck was finished; the inside partitions were placed, main engines, shafting and propeller were installed and the woodwork was begun.

The vessel was launched successfully on April 14 1904.

The pump engines for this dredge which were ordered by the department from the Polson Iron Works were not delivered during this year, so the engine installation could not be completed.

The hydraulic apparatus for operating the gates, was built and put in place.

Dredge Progress.—This spoon dredge which was begun in the previous year, was finished in the summer of 1903. Supplementary apparatus was added to fit this dredge for salt water work. After working during the summer of 1903, the dredge was brought to Sorel and some slight alterations were made to the machinery, and it is understood that she is now giving every satisfaction.

Tug Montcalm.—This is a twin screw wooden tug 82 feet by eleven feet six inches by nine feet. The hull which had been begun in the spring of 1903, was finished in this fiscal year. The boiler was built at Sorel and placed in the vessel. The old engines of the tug *John Pratt* were rebuilt and used for this tug. This tug was ready for operating in the spring of 1904, and has been working satisfactorily since.

Dredge International.—This dredge, which was bought by the department in the summer of 1903, was brought to Sorel the following winter and was overhauled and many changes made to the machinery and outfitting. The dredge was equipped with new spuds and a new arm for dredging in 60 feet of water, and the crane and the front part of the dredge was strengthened to enable her to do this work. The crew quarters were rebuilt and enlarged and all the machinery was overhauled and repaired.

Scows for Dredge Progress.—Two dump scows of a capacity of 200 cubic yards each were built for the use of the dredge *Progress.* These scows were built of Douglass fir and equipped with a new set of opening gear for the gates, which was designed at the Sorel ship yard. It is understood that these scows are giving every satisfaction.

Stone Lifter No. 3.—Machinery for this stone lifter was designed and built during this year. The hull was finished, the machinery placed and the boat was ready for work in the beginning of the summer of 1904.

Coal Barge No. 4.—A small amount of work was done on this barge in the previous year. The hull was completed in this fiscal year. The boat was equipped with boiler, steam winch and necessary outfit and was ready for operation in the spring of 1904.

Dredge J. Israel Tarte.—One of the boilers of this dredge having exploded in the fall of 1902, it was decided to equip it with four new boilers.

The upper works of the dredge had to be completely changed to accommodate these boilers. This work was carried out at Sorel during the winter.

The boilers were ordered from the Bertram Engine Works Company, Messrs. John Inglis & Son, of Toronto, and were to be delivered on May 1. They were only delivered in the latter part of the summer, so that the dredge was not ready for work in the spring of 1904. The machinery of the dredge was overhauled and put in good order.

Hopper Scows.—Two new hopper scows, of a capacity of 250 yards each, intended for use on the St. Lawrence ship channel, were begun in the spring of 1904. The timber for these scows was received, but very little work was done before June 30.

New Buckets.—Two new sets of Rock buckets were supplied for the dredges *Lady Minto* and *Lady Aberdeen*. These dredges were equipped before with buckets for soft material. A complete outfit was provided, consisting of buckets, manganese pins and bushes and upper and lower tumblers. The necessary alterations were made to the dredges to install these buckets and tumblers.

The dredge *Laurier* was also equipped with a new set of buckets of a heavier pattern than those she had been using before.

Dredge Laval.—The hull of this dredge was rebuilt from the water line up on account of defects which had developed in the old timber. The hull was strengthened by the addition of steel girders. Additional quarters were provided for the crew and practically the whole of the upper works were rebuilt.

Hoisting Winch.—An electrical hoisting winch was installed in connection with the shear legs at the ship yard. This new winch enables us to lift a load of fifty tons.

Maintenance of Fleet.—The usual repairs were effected on the different vessels of the St. Lawrence ship channel, and the machinery was kept in good order during the working season. Repairs also were made to the dredges *Nithsdale* and *St. Louis* and a certain amount of work was done for the St. Maurice dredging fleet. The buildings in the ship yard were painted and the machinery was kept in proper repair during the year.

PUBLIC WORKS OF CANADA.

River St. Lawrence Ship Channel.

Abstract of work of Dredging Fleet during fiscal year ended June 30, 1904.

Dredge.	Locality of Dredging.	Time of Service.	Nominal Working Time 10 hrs. per Day.	Hours Actual Dredging.	Number of Scows filled.	Number of Cubic yards Dredged, scow Measurement.	Depth of Dredging at low water of 1897.	Width.	Character of Soil.	Remarks.
'Lady Aberdeen'	Contrecœur—	Days.	Hours.				Ft. In.	Feet.		
	St. Ours Traverse	26	500	346	633	126,600	30 0	450	Clay and stones	Capt. N. Dauphinais.
	Bellmouth Curve	32	610	443½	846	169,200	30 0	450	Blue clay	
	Sorel to Ile de Grace	68	1,305	838½	1,428	285,600	30 0	450	Soft clay and sand	
	Pointe aux Trembles (en haut)	18	345	239½	90	18,000	30 0	500	Clay sand and stones	
	Port St. Francis	32	615	432¼	250	50,000	30 0	350	Clay and stones	
		176	3,375	2,299½	3,247	649,400				
'Lady Minto'	Contrecœur Traverse	55	1,055	780¼	1,205¼	241,050	30 0	450	Blue clay and stones	Capt. R. Matte.
	Port St. Francis	55	1,050	371¼	268¼	53,650	30 0	500	Clay sand and boulder	
	Pointe aux Trembles (en haut)	14	270	141½	54¼	11,640	30 0	450	Clay and stones	
		124	2,375	1,293	1,527¾	306,340				
'Laurier'	Pointe aux Trembles (en haut)	82	1,570	981	394	78,800	30 0	450	Clay and stones	Capt. C. Gendron.
	Sorel to Ile de Grace	54	1,035	553¼	894	206,550	30 0	450	Soft clay and sand	
	Vercheres to Cap St. Michel	12	230	120¾	32	6,400	30 0	450	Clay and stones	
	Port St. Francis	32	615	298¼	131	26,200	30 0	500	"	
		180	3,450	1,953¼	1,451	317,950				
'Laval'	Champlain	3	55	23¼	21	3,150	27 6	300	Sand	Capt. B. Ladebauche
	Pointe aux Trembles (en haut)	118	2,265	1,497¾	1,237	184,750	30 0	450	Clay and stones	
	Becancour to Champlain	20	385	285½	195	29,250	30 0	450	"	
		141	2,705	1,806½	1,453	217,150				

'Lafontaine'	Contrecœur—									
	Bellmouth Curve	13	250	150¾	287	86,100	30 0	450	Blue clay	Capt A. Marcotte.
	Contrecœur Course	49	935	617¼	828½	248,550	30 0	450	"	
	Petit Traverse	15	285	184½	300	90,000	30 0	450	"	
	Contrecœur Traverse	4	80	47½	33	9,900	30 0	450	Blue clay and stones.	
	Lake St. Peter, Nicolet Traverse	74	1,420	656	649	194,700	30 0	350	" "	
	Vercheres to Contrecœur	4	75	43	27	8,100	30 0	450	Hard clay	
	Vercheres to Cap St. Michel	19	365	252	383½	115,050	30 0	450	Clay and stones	
		178	3,410	1,951	2,508	752,400				
'Baldwin'	Pointe aux Trembles (en haut)	107	2,050	1,528½	922	271,080	30 0	450	Clay and stones	Capt. L. Dauphinais
	Becancour	29	555	418½	166	49,800	30 0	450	"	
		136	2,605	1,947	1,088	320,880				
'J. Israel Tarte'	Lake St. Peter	106	2,328	1,598	.....	2,055,140	30 0	450	Soft blue clay	L. A. Desy, M.E.
						4,619,260				

DREDGING SHIP CHANNEL, River St. Lawrence between Montreal and

Vessels.	Fuel.	Wages.	Board.	Stores and materials.	Repairs. — Labour.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Dredge 'Lady Aberdeen'	4,729 00	6,913 17	2,251 60	1,160 81	3,516 20
Tug 'Cartier'	1,788 25	3,613 12	1,496 00	309 83	1,391 81
Dredge 'Lady Minto'	3,707 00	6,651 24	2,082 26	1,048 73	5,028 58
Tug 'St. Jean Iberville'	2,661 00	3,720 90	1,527 62	383 65	1,436 74
Dredge 'Laurier'	4,851 25	6,642 17	2,562 77	997 24	6,120 72
Tug 'St. Francis'	1,608 00	2,515 73	917 18	257 20	750 50
Dredge 'Laval'	4,696 25	5,971 65	2,136 27	986 27	3,973 01
Tug 'Jesse Hume'	1,580 00	2,805 28	948 42	266 86	863 71
Dredge 'Lafontaine'	5,310 25	6,574 28	2,649 74	1,276 70	5,281 63
Tug 'Emilia'	1,629 00	2,604 79	986 24	520 27	627 57
Dredge 'Baldwin'	4,267 00	5,842 58	1,909 61	618 54	8,400 13
Tug 'Champlain'	1,585 25	3,247 06	1,261 04	256 67	818 90
Dredge 'J. Israël Tarte'	16,071 60	10,209 97	2,617 95	1,826 48	3,709 74
Tug 'Lac St. Pierre'	3,255 25	3,683 89	1,549 49	745 28	997 71
" 'Montcalm'	474 00	815 54	261 82	118 55	56 22
Stone Lifter 'No. 2' } Divided equally	180 75	516 39	127 70	63 67	411 80
" 'No. 3' } bet. elev. dredgs	45 50			64 14	3 60
Str. 'Frontenac' } Div. $\frac{1}{8}$ to each	3,133 53	4,222 93	2,203 25	1,631 71	1,549 62
" 'Eureka' } elev. dredge	2,621 40	3,087 43	1,485 22	1,751 65	7,775 02
" 'Jas. Howden' } and $\frac{3}{8}$ hydrau-	2,554 00	3,141 83	1,968 17	1,615 98	1,031 43
Tug 'Monitor' } lic dredge.	393 00	193 00	146 60	405 80	1,843 22
" 'Carmelia'	62 52	28 00	6 00	229 84	479 10
Hydraulic Survey					
Str. 'De Levis'	1,596 50	2,968 96	350 75	1,066 10	768 94
Dredge 'Progress'	126 25		32 12	672 59	43 16
" 'No. 6'	110 00	3,069 31	35 08	143 21	1,274 05
Expenditure for Plant					
Shops, Stores on hand, &c					
Str. 'James Howden' (No. 8)					
Tug 'Montcalm' (No. 9)					
Stone Lifter 'No. 3'					
Coal Barge 'No. 4'					
New Scows Nos. 14 and 15					
New Buildings					
Ship Yard Railway					
New sets of buckets					
Dredge 'Laval' New Hull					
" 'J. I. Tarte' Boilers, &c					
Electric hoisting gear					
New tools and machinery					
Coal on hand					
Stores and materials					
Resumé.					
Cost of dredging					
Expenditure for plant					
Shops, Surveys, &c					
Totals	69,036 53	89,039 22	31,512 90	18,417 77	58,153 11

SESSIONAL PAPER No. 19

Quebec, Classification of Disbursements for Fiscal Year ended June 30, 1904.

General Expenditure New Plant, Rebuilding, Ship Yard, &c.	Proportion of General and Office Expenses, &c.	Expenditure for Each Vessel.	Stone lifter Service. Elevator Dredges	Tug Service.	Inspecti'n, Towing, Sweeping, &c.	Hydrographic Survey including Str. 'De Levis'.	Total Cost of Operations of each dredge and plant, during fiscal Year.	Total Expenditure on Ship Channel Appropriations.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
.....	1,682 00	20,252 78	256 92	9,379 01	5,938 53	.....	35,827 24	.....
.....	780 00	9,379 01	.....	.....	.....	.....	.....	.....
.....	1,677 00	20,194 81	256 92	10,611 91	5,938 53	.....	37,002 17	.....
.....	882 00	10,611 91	.....	.....	.....	.....	.....	.....
.....	1,917 00	23,091 15	256 95	6,596 61	5,938 53	.....	35,883 24	.....
.....	548 00	6,596 61	.....	.....	.....	.....	.....	.....
.....	1,606 00	19,369 45	256 92	7,050 27	5,938 53	.....	32,615 17	.....
.....	586 00	7,050 27	.....	.....	.....	.....	.....	.....
.....	1,912 00	23,004 60	256 92	6,943 87	5,938 53	.....	36,143 92	.....
.....	576 00	6,943 87	.....	.....	.....	.....	.....	.....
.....	1,908 00	22,945 86	256 92	7,817 92	5,938 53	.....	36,959 23	.....
.....	649 00	7,817 92	.....	.....	.....	.....	.....	.....
.....	3,174 08	37,609 82	.....	13,040 75	11,877 05	.....	62,527 62	.....
.....	927 00	11,158 62	.....	.....	.....	.....	.....	.....
.....	156 00	1,882 13	.....	.....	.....	.....	.....	.....
.....	117 00	1,417 31	.....	.....	.....	.....	.....	.....
.....	11 00	124 24	.....	.....	.....	.....	.....	.....
.....	1,155 00	13,896 04	.....	.....	.....	.....	.....	.....
.....	1,515 00	18,235 72	.....	.....	.....	.....	.....	.....
.....	934 00	11,245 41	.....	.....	.....	.....	.....	.....
.....	271 00	3,252 62	.....	.....	.....	.....	.....	.....
.....	73 00	878 44	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	28,692 49	.....	.....
.....	612 00	7,363 25	.....	.....	.....	7,363 25	.....	.....
.....	79 00	953 12	.....	.....	.....	.....	.....	.....
.....	421 00	5,052 65	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
588 12	.....	.....	.....	.....	.....	.....	.....	.....
9,373 84	.....	.....	.....	.....	.....	.....	.....	.....
9,140 94	.....	.....	.....	.....	.....	.....	.....	.....
14,641 35	.....	.....	.....	.....	.....	.....	.....	.....
16,587 78	.....	.....	.....	.....	.....	.....	.....	.....
176 94	.....	.....	.....	.....	.....	.....	.....	.....
1,220 22	.....	.....	.....	.....	.....	.....	.....	.....
60,470 90	.....	.....	.....	.....	.....	.....	.....	.....
20,350 38	.....	.....	.....	.....	.....	.....	.....	.....
50,518 66	.....	.....	.....	.....	.....	.....	.....	.....
4,981 86	.....	.....	.....	.....	.....	.....	.....	.....
6,281 26	.....	.....	.....	.....	.....	.....	.....	.....
15,996 41	.....	.....	.....	.....	.....	.....	.....	.....
56,375 27	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	276,958 59
.....	.....	.....	.....	.....	.....	.....	.....	308,765 44
266,703 93	24,168 08	290,327 61	1,541 55	61,440 34	47,508 23	36,055 74	276,958 59	585,724 03

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DREDGING SHIP CHANNEL, River St. Lawrence between Montreal

DETAILS OF DREDGING, LOCALITY

Dredges.	Total Cost of Operations of each dredge and plant, during Fiscal Year.	Number of days in Operation, each Dredge.	Cost per Day. Operations of Dredge and plant.	Days Working each Locality.	Cost of Work each Locality.	Total Cost of Operations of each Dredge.
	$ cts.		$ cts.		$ cts.	$ cts.
Dredge 'Lady Aberdeen'	35,827 24	176	203 56	26	5,292 66	
" "				32	6,514 04	
" "				68	13,842 38	
" "				18	3,664 18	
" "				32	6,513 98	
" "						35,827 24
Dredge 'Lady Minto'	37,002 17	124	298 40	55	16,412 24	
" "				55	16,412 24	
" "				14	4,177 69	
" "						37,002 17
Dredge 'Laurier'	35,883 24	180	199 35	82	16,346 80	
" "				54	10,764 97	
" "				12	2,392 23	
" "				32	6,379 24	
" "						35,883 24
Dredge 'Laval'	32,615 17	141	231 31	3	693 96	
" "				118	27,294 94	
" "				20	4,626 27	
" "						32,615 17
Dredge 'Lafontaine'	36,143 92	178	203 65	13	2,639 74	
" "				49	9,949 72	
" "				15	3,045 85	
" "				4	812 24	
" "				74	15,026 08	
" "				4	812 23	
" "				19	3,858 06	
" "						36,143 92
Dredge 'Baldwin'	36,959 23	136	271 75	107	29,078 21	
" "				29	7,881 02	
" "						36,959 23
Dredge 'J. Israël Tarte'	62,527 62	106	589 88	106	62,527 62	
" "						62,527 62
Totals	276,958 59	1,041		1,041	276,958 59	276,958 59

and Quebec, Classification of Disbursements, &c.—*Continued.*

AND COST PER CUBIC YARD.

Number of Cubic Yards dredged each Locality.	Total Cubic yards for each Dredge.	Cost per Cubic yard. — Each Locality	Average Cost per Cubic Yard for each Dredge.	Kind of Material Dredged.	Locality of Dredging.
		Cts.			
126,600		$4\frac{18}{100}$		Clay and stones	Contrecœur, St. Ours Traverse.
169,200		$3\frac{84}{100}$		Blue clay	" Bellmouth Curve
285,600		$4\frac{34}{100}$		Soft clay and sand	Sorel to Ile de Grace.
18,000		$20\frac{35}{100}$		Clay, sand and stones	Pte. aux Trembles (en haut).
50,000		$13\frac{02}{100}$		Clay and stones	Port St. Francis.
	649,400		$5\frac{31}{100}$		
241,050		$6\frac{80}{100}$		Blue clay and stones	Contrecœur Traverse.
53,650		$0\frac{59}{100}$		Clay, sand and boulders	Port St. Francis.
11,640		$35\frac{49}{100}$		Clay and stones	Pte. aux Trembles (en haut).
	306,340		$12\frac{07}{100}$		
78,800		$20\frac{75}{100}$		" "	" "
206,550		$5\frac{21}{100}$		Soft clay and sand	Sorel to Ile de Grace.
6,400		$37\frac{27}{100}$		Clay and stones	Verchères to Cap St. Michel.
26,200		$24\frac{24}{100}$		" "	Port St. Francis.
	317,950		$11\frac{88}{100}$		
3,150		$22\frac{03}{100}$		Sand	Champlain.
184,750		$14\frac{77}{100}$		Clay and stones	Pte. aux Trembles (en haut).
29,250		$15\frac{81}{100}$		" "	
	217,150		$15\frac{01}{100}$		
86,100		$3\frac{06}{100}$		Blue clay	Contrecœur, Bellmouth Curve.
248,550		$4\frac{00}{100}$		"	" Contrecœur Course.
90,000		$3\frac{38}{100}$		"	" Petite Traverse.
9,900		$8\frac{20}{100}$		" and stones	" Contrecœur Traverse.
194,700		$7\frac{72}{100}$		" "	Lake St. Peter, Nicolet Traverse.
8,100		$10\frac{92}{100}$		Hard clay	Verchères to Contrecœur.
115,050		$3\frac{35}{100}$		Clay and stones	" Cap St. Michel.
	752,400		$4\frac{81}{100}$		
271,080		$10\frac{78}{100}$		" "	Pte. aux Trembles (en haut).
49,800		$15\frac{82}{100}$		" "	Becancour.
	320,880		$11\frac{51}{100}$		
2,055,140		$3\frac{04}{100}$		Soft blue clay	Lake St. Peter.
	2,055,140		$3\frac{04}{100}$		
4,619,260	4,619,260				

DREDGING PLANT.

The following is a description of the dredging plant owned and operated by the Public Works Department in connection with the River St. Lawrence ship channel between Quebec and Montreal.

DREDGES.

The Elevator Dredge 'Laval' (wooden hull).

Length over all—150 feet.
Breadth of beam—30 feet.
Depth of hold—14 feet.
Average draught—11 feet.
Greatest working depth—43·5 feet.
Hull built in Ottawa in 1894.
Steel buckets.
Working capacity per day in hard material—1,000 to 2,000 cubic yards.

The Elevator dredge 'Laurier' (wooden hull).

Length over all—168 feet.
Breadth of beam—32 feet.
Depth of hold—14 feet.
Average draught—11 feet.
Greatest working depth—42·5 feet.
Built at Sorel shipyard in 1897.
⅜ cub. yd. buckets for hard-pan.
Working capacity per day in fairly stiff clay—2,000 to 3,000 cubic yards.

The Elevator Dredge 'Lady Aberdeen' (steel hull).

Length over all—148 feet.
Breadth of beam—32 feet.
Depth of hold—13 feet.
Average draught—7·5 feet.
Greatest working depth—42·5 feet.
Built at Sorel shipyard in 1900.
Steel buckets.
Working capacity per day in soft material—4,000 to 5,000 cubic yards.

The Elevator Dredge 'Lady Minto' (steel hull).

Length over all—148 feet.
Breadth of beam—32 feet.
Depth of hold—13 feet.
Average draught—7·5 feet.
Greatest working depth—42·5 feet.
Built at Sorel shipyard in 1900.
Steel buckets.
Working capacity per day in stiff clay and stones—2,000 to 4,000 cubic yards.

The Elevator Dredge 'Lafontaine' (wooden hull).

Length over all—168 feet.
Breadth of beam—32 feet.
Depth of hold—14 feet.
Average draught—9 feet.
Greatest working depth—45 feet.
Built at Sorel shipyard in 1901.
1¼ cubic yards buckets for soft material.
Working capacity per day in soft material—5,000 to 6,000 cubic yards.

The Elevator Dredge 'Baldwin' (wooden hull).

Length over all—165 feet.
Breadth of beam—34 feet.
Depth of hold—14 feet.
Average draught—8 feet.
Greatest working depth—45 feet.
Built at Sorel shipyard in 1902.
1 cubic yard buckets strengthened for fairly hard material.
Working capacity per day in medium material—2,500 to 3,500 cubic yards.

The Hydraulic Dredge 'J. Israel Tarte' (steel hull).

Length over all—160 feet.
Breadth of beam—42 feet.
Depth of hold—12·5 feet.
Average draught—6 feet.
Length of suction frame—80 feet.
Greatest working depth—50 feet.
Built at the Polson Iron Works, Toronto, in 1902.
Working capacity per day in soft material—12,000 to 20,000 cubic yards.

TUGS.

The Tug 'Frontenac' (composite hull).

Length over all—113 feet.
Breadth of beam—23 feet.
Depth of hold—10 feet.
Average draught—9 feet.
Built at Sorel shipyard in 1901.

The Tug 'Eureka' (steel hull).

Length over all—100 feet.
Breadth of beam—22 feet.
Depth of hold—12 feet.
Average draught—11 feet.
Built in Glasgow, Scotland, in 1893.

The Tug 'De Levis' (wooden hull)—Hydrographic surveys.

Length over all—104 feet.
Breadth of beam—20 feet.
Depth of hold—10 feet.
Average draught—9 feet.
Built at Sorel shipyard in 1902.

PART V

REPORT ON GOVERNMENT TELEGRAPH LINES

FOR THE

FISCAL YEAR ENDED JUNE 30, 1904

GOVERNMENT TELEGRAPH SERVICE.

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF THE GENERAL SUPERINTENDENT,
OTTAWA, ONT., December 9, 1904.

F. GELINAS, Esq.,

Secretary, Department of Public Works.

SIR,—I beg to submit herewith my report on the Government Telegraph Service for the twelve months ended June 30, 1904.

This report, as usual, is prefaced by a list to the present date of the land lines and cables in operation ; with data of lengths, year of construction, number of offices at present established, and an estimate of the traffic handled in each instance.

The usual tabular statements, giving lists of the offices, operating staff, &c., in the several districts are appended to the report; likewise the tariff sheets, showing the rates charged for messages on the several lines.

I have the honour to be, sir,
Your obedient servant,

D. H. KEELEY,
General Superintendent.

GOVERNMENT TELEGRAPH SERVICE.

Location of Lines.	Points connected.	Year.	Length of Lines.			Number of Offices.	Yearly Average of Messages Sent.
			Land Lines.	Cables.	*Total.		
			Miles.	Kt's.			
Newfoundland	Port au Basque—Cape Ray	1883	14		14	2	
Nova Scotia	North Sydney—Meat Cove (with loops)	1880-02	167¼		168¼	17	5,000
"	Across Bras d'Or Channel	1880		½			
"	" St. Ann's Harbour	1887		¼			
"	" Ingonish Harbour	1887		¾			
"	Bras d'Or—Kempt Head	1904	20		20	3	
"	Meat Cove—St. Paul's Island	1890		20	23	1	50
"	On St. Paul's Island	1890	3				
"	Mabou—Meat Cove	1887-00	109		109	9	2,500
"	Barrington—Cape Sable	1883	16		17¾	Leased.	
"	Across Bear Point Channel	1883		1½			
"	" Lt. House Channel	1883		¼			
"	Mabou—Port Hawkesbury	1903	41¾		73¾		
"	Port Hawkesbury—St. Peters	1903	32				
"	St. Peters—Main-à-Dieu	1904	80¾		125¼	15	1,500
"	Main-à-Dieu—Scatarie	1902		1¾			
"	On Scatarie Island	1904	7¼				
"	Gabarous—North Sydney	1904	35½				
New Brunswick	Chatham—Escuminac	1885	42		42	6	600
	Bay of Fundy System:						
"	Eastport—Campobello	1880		1¾	44¼	10	2,500
"	On mainland Eastport	1880	½				
"	On Campobello Island	1880	7½				
"	Campobello—Grand Manan	1880		7¼			
"	On Grand Manan Island	1880	25¼				
"	Grand Manan—Cheney's Island	1890		½			
"	On Cheney's Island	1890	¾				
"	Cheney's Island—Whitehead Island	1890		¾			
"	Partridge Island—Fort Dufferin	1900		¾	¾		
Quebec	Bay St. Paul—Chicoutimi	1881-04	98		98	6	
"	St. Alexis—St. Catherines Bay	1904	78		78	5	2,000
"	Murray Bay—St. Agnes	1904	14½		14½	2	
"	Bay St. Paul—Petite River	1904	13		13	1	
"	Chicoutimi—St. Charles	1903	37		61	10	
"	St. Anne—Lac Claire	1903	15				
"	St. Anne—St. Fulgence	1903	9				
	North Shore Line:						15,000
"	Murray Bay—Chateau Bay	1881-01	1,028½		1090	66	
"	Across Saguenay River	1883		11¼			
"	Bersimis to Manicouagan	1883		12			
"	Manicouagan to Godbout	1883		26			
"	Chateau Bay—Belle Isle	1901		22¾			
	Quarantine System:						
"	Quebec—L'Ange Gardien	1885	13		52¾	8	2,300
"	L'Ange Gardien—Orleans Island	1885		¾			
"	On Orleans Island	1885	29¼				
"	Orleans Island—Isle Réaux	1889		2			
"	On Isle Réaux	1889	2½				
"	Isle Reaux—Grosse Isle	1889		2			
"	On Grosse Isle (all told)	1885-94	3¼				
"	St. Jean—St. Famille (loop)	1904	5½		5½	1	

GOVERNMENT TELEGRAPH SERVICE—*Concluded.*

Location of Lines.	Points connected.	Year.	Length of Lines.			Number of Offices.	Yearly Average of Messages Sent.
			Land Lines.	Cables.	*Total.		
			Miles.	Kt's.			
	Anticosti System :						
Quebec	Gaspé—L'Anse à Fougere	1881	28		316½	9	1,500
"	L'Anse à Fougère—Anticosti	1881		44¼			
"	On Anticosti Island	1881-90	223¼				
"	Anticosti—Long Point, Mingan	1890		21			
	Magdalen Island System :						
"	Meat Cove, C.B.—Magdalen Islands	1880		55	243	12	2,000
"	On Magdalen Islands	1881-02	83½	½			
"	Grosse Isle—Bryon Island	1902		11			
"	Bryon Island—Anticosti	1902		93			
	Pelee Island System :						
Ontario	Leamington—Point Pelee	1889	12		42½	9	800
"	Leamington Dock—Pelee Island	1901		17			
"	On Pelee Island	1889-00	13½				
North west	Qu'Appelle—Edmonton	1883	625		625	18	9,500
"	Moosejaw—Wood Mountain	1885	90½		90½	3	300
"	Wood Mountain—Willow Bunch	1904	38		38	7	2,000
"	Edmonton—Indian Ag. & Stoney Plain	1904	19		19		
"	Edmonton—Arthabaska Ldg.	1904	98		98		
"	Duck Lake—Batoche	1902	9		121½	3	200
"	Duck Lake—Indian Agency	1902	3½				
"	Edmonton—St. Albert	1887	9		36	3	
"	St. Albert—Qui Barre and Alexandria	1902	27				
British Columbia	Ashcroft—Quesnelle (local wire)	1878-87	215		215		
"	Victoria—Cape Beale	1891	118		118	6	800
"	Nanaimo—Comox	1893	81		81	8	8,000
"	Parksville—Alberni	1895	29½		86½	2	
"	Alberni—Cape Beale	1899	57				
"	Alberni—Clayoquot	1902	96¾		96¾	4	550
"	Kamloops—Lower Nicola	1899	67		67	9	1,400
"	Golden—Windermere	1901-02	92		92	5	1,500
"	Duncan Sta.—Salt Spring Isl. & Extens.	1902-04	33	¾	33¾	4	
Yukon	Ashcroft—Dawson and Boundary	1899-01	1845		2,252½	66	42,000
"	Hazelton—Port Simpson and Aberdeen	1901-02	202½				
"	Tagish—Cariboo Crossing	1901	18				
"	150 mile Sta.—Quesnelle Forks	1902	64				
"	Ashcroft—Lillooet	1896	62				
"	Quesnelle—Barkerville	1887	61				
	Total, end of 1904		6270	344¼	6614¼	327	102,100

* For convenience in totalling, the knots of cable are regarded as statute miles.

REPORT OF THE GOVERNMENT TELEGRAPH SERVICE FOR 1903-04.

EXPANATORY NOTES.

The tabular statement prefacing this report shows the total mileage, &c., of the telegraph lines operated by the government. Lines that have been subsidized or constructed and transferred by the government for operation by private companies are not included in this list.

The matter in the following pages comprises merely a statement of specific actions taken in the course of the year, and in any case where no particular reference is made to a line found mentioned in the list, the understanding intended to be conveyed is that that line has been satisfactorily operated throughout the year, without any change of conditions since last made mention of in the annual reports.

NEWFOUNDLAND.

The line from *Port au Basque* to *Cape Ray* continued to be operated as heretofore, under an arrangement with the Anglo-American Telegraph Company.

MARITIME PROVINCES.

New Lines in Cape Breton.—As was mentioned in last year's report the sections between Mabou and Port Hawkesbury, and between Port Hawkesbury and St. Peters, were completed in May, 1903. As soon as practicable thereafter arrangements were made for the putting of these lines in operation and the following appointments went into effect, the office at Mabou continuing as previously, in connection with the line to Meat Cove, which is now worked through to Port Hawkesbury.

Port Hood, agent operator, D. J. McDonald, October 1, 1903.
Judique, agent operator, Miss A. McPherson, October 1, 1903.
Craignish, agent operator, J. D. Cameron, October 1, 1903.
Port Hastings, agent operator, Miss Maggie McFarlane, October 1, 1903.
Pt. Hawkesbury, agent operator, Miss E. McDonald, October 1, 1903.
River Bourgeois, agent operator, Angus Boyd, October 1, 1903.
St. Peters, agent operator, D. Morrison, November 1, 1903.

Local Repair Sections.—As was already the case on the North Sydney-Meat Cove and Meat Cove-Mabou lines, the further extension of the latter line to Port Hawkesbury has been provided for and the following new appointments are added to the list appearing in last years report :—*Mabou-Judique* (20 miles) J. A. Campbell, Port Hood, local lineman at $50 per year; and for *Judique-Port Hawkesbury* (22 miles) J. N. McIsaac, Craignish, $50; the appointments dating from May 1, 1904.

St. Peters-North Sydney and Scatarie.—The construction of the lines from St. Peters to Main-à-Dieu, and on Scatarie island, and from Gabarus to North Sydney ; was completed under contract by Messrs. Ahearn & Soper, of Ottawa in March, 1904. The specification followed was the same as for the other new sections in Cape Breton described in last year's report. The line from St. Peters to Main-à-Dieu covers a distance of 80⅜ miles with additional wire on loops of a half mile at Lower L'Ardoise and three miles at Gabarus. The length of line on Scatarie island is 7¼ miles and connection between this and the line on the main land is made by the cable laid for the purpose last year. The length of pole line between North Sydney and the Junction

with the Main-à-Dieu line is 35½ miles and the wire is carried a further distance of three miles on the loop line to Gabarus. Several offices were opened on the St. Peters-Main-à-Dieu section in the course of construction by the teaching operator, Miss Bingham, who qualified the appointed agents in advance while the work of construction was progressing. The offices that have been established are the following :—

St. Peters, agent operator, D. Morrison, November 1, 1903.
Lower L'Ardoise, agent operator, M. Bremner, November 1, 1903.
Grand River, agent operator, Miss J. Finlayson, November 1, 1903.
Fourchu, agent operator, Miss May Hardy, November 1, 1903.
Gabarus, agent operator, Miss C. Grant, aJnuary 16, 1904.
Louisburg, agent operator, Wesley Townsend, February 1, 1904.
Main-à-Dieu, agent operator, Miss Maud Dixson, June 1, 1904.
Scatarie Island West, agent operator, E. E. Pope, August 15, 1904.
Scatarie Island East, agent operator, J. T. Martell, August 1, 1904.
North Sydney (branch from Gabarus, Western Union Telegraph connected), December 11, 1903.

Scataric Island Cable.—In some rough weather in June (1904) this cable was damaged and communication ceased on the 24th of that month (Note.—The ss. 'Tyrian' on her way to the gulf shortly afterwards attended to the repair and restored the connection on July 23.)

Southern Telephone Company.—In consequence of the liability to interference in places by the wire of the new line with the wire of the telephone company that had been previously following the same route, an agreement was entered into whereby the government telegraph wire may be put on the telephone company's poles where needful for clearance and the company may put their wire on the telegraph poles wherever desired on the stretch between Louisburg and Gabarus.

Circuit arrangements.—Since these lines were completed, automatic repeaters have been placed at Gabarus, whereby North Sydney has direct communication with Scatarie, and at the same time via Gabarus and St. Peter's with Port Hawkesbury ; and for convenience of the operation of the older sections, automatic repeaters have been placed at Meat Cove, whereby North Sydney has direct communication round that way also with Port Hawkesbury, the arrangement thus affording alternative routes, in event of local trouble, for the handling of business exchanged with the Western Union Telegraph system at the North Sydney office.

North Sydney—Meat Cove Section.—Pursuant to the arrangement made last year for the regular services of a general lineman for the Meat Cove-Port Hawkesbury section, as set forth in the last annual report, a similar appointment was decided upon for the Meat Cove-North Sydney section, and Mr. S. S. Burke, of Ingonish, joined the service in that capacity in April, 1904.

Northing beyond ordinary repair work, performed by the regular staff, was called for during the year.

Inverness Town.—This is the name by which the former Broad Cove office is now known. As mentioned in last year's report, the location of this office was a three-mile loop changed from the old place to the settlement that has grown up about the mines. The operating arrangement of this office since the change was made October 20, 1903, has been a commission of 50 per cent of the government line tolls without a guarantee, instead of the former allowance of 25 per cent guaranteed at the rate of $50 per year.

Cape North (Inland).—In May, 1904, an office was opened at this place, which is 5 miles from Aspy Bay and 4 miles from Dingwall, with Mr. John McDonald as

agent, the operating arrangement being a commission of 25 per cent of the government line tolls with the usual guarantee at the rate of $50 per year.

New Campbellton.—Miss M. C. Campbell, former agent, having resigned the office on May 1, 1904. Mr. B. Dunlop was appointed to take charge of it, but afterwards requested another arrangement. (This office was put in charge of Mr. J. S. Birchall in July, with same guaranteed commission as before.)

At Ingonish (North Bay).—Owing to the decease of the former agent, Mr. J. M. Burke, who had the office since 1882, a new appointment was called for in May, 1904; and in June it was taken over by Mrs. S. S. Burke, with same operating arrangement as before.

At South Gut.—On the Baddeck loop line, an office is about to be opened (June, 1904) with Miss Rachael Morrison as agent-operator on commission of 25 per cent of government line tolls, with the usual guarantee at the rate of $50 per year. There was an office at this place prior to December 31, 1899.

At Baddeck.—The office is to be transferred from Mr. Alex. Anderson, former agent-operator, to Mrs. Anderson, from July 1, 1904, and the operating arrangement provides for a commission of 25 per cent with a guarantee at the rate of $100 per year, the business of the office being considered sufficient to warrant an exception to the usual rate of $50, that was previously attached to this office.

At Meat Cove.—Where connection is made with the Magdalen islands and St. Paul's island cables, and where a set of automatic repeaters is now located as already mentioned (New lines, Circuit arrangements) a special arrangement was recently made (May, 1904) whereby Mr. A. B. McDonald, agent and circuit manager, was temporarily relieved by Miss M. J. McDonald, as acting agent-operator; with Mr. J. J. LeBourdais, of Grindstone, Magdalen islands, as assistant; and his services called into requisition in the capacity of electrician accompanying the ss. 'Tyrian' in the important work of cable repairs elsewhere made mention of in this report. The arrangement thus effected has proven in every way satisfactory.

Local repair sections.—Mr. D. McLeod, who had been attending to the North Sydney-Englishtown section, resigned from June 30, 1903, and was succeeded by Mr. D. Campbell; the allowance, previously $60 per annum, was increased to $100.

Renewal of wire.—At North Sydney, in consequence of the Meat Cove line (built in 1879) having within the town and immediate neighbourhood become badly deteriorated and weak, it was found advisable to renew that portion of it for a length of 1½ miles. This was done accordingly in January, 1904.

Meat Cove—Mabou Section.—*At Cape St. Lawrence.*—As provided for last year, an office chiefly in the interest of the signal service, was established with C. Jamieson in charge, as agent-operator, his appointment dating from January 1, 1904.

At Pleasant Bay the office formerly in charge of Mrs. D. Smith was, upon her request, transferred to Miss M. J. McIntosh from October 15, 1903.

Local repair sections.—Mr. P. LaRede was appointed to look after the Grand Etang-Cheticamp section from May 20, 1903, instead of Mr. M. Lindee, as given in the list in last year's report; and Moses F. Aucoin was appointed June 1, 1904, for the Cheticamp-Barren section, formerly attended to by F. Aucoin, resigned.

Nothing beyond ordinary repair work, performed by the regular staff, was called for during the year.

Boulardarie Island.—The supply of poles for and the construction of the line from Big Bras d'Or to Upper Kempt Head, twenty miles, was put in the hands of Mr.

Donald McKenzie of Boulardarie Centre for performance by day labour and is nearing completion. The specification was the same as that followed in the case of the other recently built lines in Cape Breton.

Magdalen Islands.—Pursuant to what was mentioned in last year's report, a further supply of 800 poles (cedar) was obtained at Gaspé for the completion of the reconstruction work that was proceeded with in the course of the season. An extension of the Point Basse loop line is to be made to South Beach as soon as the poles can be distributed in that section.

At Grosse Isle.—In consequence of the establishment of through connection between Cape Breton and Anticosti by way of the Bryon Island cables an assistant operator, Mr. J. Quinn was appointed from December 1, 1902.

Cable Repairs.—The cable between Meat Cove and Old Harry became interrupted on May 2, 1904. The ss. 'Tyrian' happened to be soon afterwards available however and a repair was effected on the 31st of the same month. The trouble proved to be a break 24¾ miles off the Magdalen Islands, and the indications were that it had been caused by a vessels anchor.

Bryon Island Cables.—The cable between Grosse Isle and Bryon Island ceased working on September 12, 1903. Communication was restored by the ss. 'Tyrian' on October 3. It was found chafed through on rocky bottom off the Bryon Island landing. This same cable gave out again on January 1, 1904; the interruption was for a time thought to be due to some local trouble at Bryon Island but was finally located in the cable stretch. The connection was again restored by the ss. 'Tyrian' on June 3, 1904. This time the cable was found badly crushed at several spots near the Bryon Island landing and broken off short 1¼ knots farther out.

The *Bryon-Anticosti section* became interrupted on December 2, 1903. It would have been impracticable to attempt a repair so late in the year and in the course of the present season this cable remained unattended to because of the services of the ss. 'Tyrian' being required elsewhere for more important stretches. Meanwhile however no inconvenience was experienced as Anticosti was reached by way of the cables from Gaspé and Long Point of Mingan. (Note.—This cable between Bryon and Anticosti was restored by the ss. 'Tyrian' on October 3, 1904. It was crushed by ice and broken off 2¼ knots out from Bryon Island and also broken on the beach at the Heath Point end.)

Anticosti Island.—Under an appropriation provided for the purpose last year a sufficient quantity of No. 6 galvanized iron wire was procured for the renewal of the stretch of 184 miles between Beescie river and Fox Bay and in the course of the present season this and other requisite material is being delivered at several points in readiness for the work of stringing which will be proceeded with as early as practicable.

Some clearing, tree trimming, &c., and general repairs were done by the regular lineman with local assistance on the stretch between Mechastic Bay and South West Point and such other work was done along the line as was needful to keep it in working order.

Cable Repairs.—The cable between Heath Point and Bryon Island was interrupted from December 2, 1903, until October 3, 1904, as already related under the heading of Bryon Island cables. The stretches between South West Point and Gaspé and between Mechastic Bay and Long Point continued in good working order since the last named cable was repaired in August, 1903. This through communication between the North shore and Gaspé afforded an alternative route for the traffic which would otherwise have

been interfered with by the interruption of the cable between Godbout and Manicouagan, elsewhere dealt with, and the service was satisfactorily performed throughout the year.

Indemnity for lost anchor.—In consequence of the sacrifice of an anchor and hawser by the schooner 'Massachusetts' on May 15, 1903, at a spot about ten miles off South West Point where she was believed to have run foul of the Gaspé cable, and thereupon took the course indicated with a view to its preservation from damage, the department was called upon to make good the loss sustained, and payment was made accordingly upon the presentation of the usual documents establishing the value, &c., as is called for in such cases.

Escuminac line.—Arrangements were in hand at the close of the fiscal year for the opening of an office at McDougall's or Loggieville, formerly called Black Brook, with Mrs. M. McDougall as agent operator.

General Repairs.—At the close of the fiscal year an arrangement was being made for a general overhauling of this line, the poles requiring to be straightened up and renewed in places.

Chatham-tracadie.—At the last session of parliament there was an appropriation of $2,000 made for aid towards an extension of the Mirimichi Telephone Company's system from Chatham to Tracadie and at the close of the fiscal year this work was nearing completion. (Note.—This line, sixty miles in length, was completed in a satisfactory manner and put in operation in August, 1904. Under an agreement with the department, the company is to handle messages on government business free of charge).

Bay of Fundy.—The cable between Campobello and Grand Manan, which had been working well since the repair of July 25, 1903, noted in last years report, suddenly became interrupted on April 30, 1904. The ss. 'Tyrian' was sent to the locality as soon as practicable and restored the connection on June 17, 1904. In this instance the trouble was found to be a quarter of a mile off the landing at Long Eddy, the sheathing wires were corroded away and it is likely some small vessel's anchor ran foul of and parted the core.

Deer Island.—Under an appropriation that was made for the purpose last year, a local telephone company establishing a system on Deer Island were aided by the provision of two lengths of cable connecting with Eastport, Maine, and with Campobello Island; on an understanding that the company undertakes in the event of an interruption at any time, to themselves make repairs; or await the convenience of the department, which would be referable to the presence of the government cable ship in the vicinity on occasion. These cables were laid by the ss. 'Tyrian,' June 21-23, 1904; from Johnston's Cove near Eastport to Fair Haven, Deer Island, $2\frac{3}{4}$ knots of cable; and from Chocolate Cove, Deer Island, to Pollock Cove, Campobello, two knots. Four terminal huts were also provided; two of them being put up by the ship's carpenter; and the others, for which material was left on the spot, subsequently dealt with locally.

North Shore of St. Lawrence (West of Bersimis).—The construction of new lines in the Chicoutimi district, in hand in the course of the summer of 1903, as mentioned in last year's report, was carried to completion with the exception of the line to Descente des Femmes which was only carried from St. Anne to St. Fulgence, nine miles. All of this work has been performed without contract by day labour under the immediate direction of M. J. C. Tache, resident engineer for the department at Roberval. The further length, about twenty-five miles, from St. Fulgence to Descente des Femmes has been provided for; and, as well, a loop off the main line at *St. Alexis, to Ferland,* a distance of four and a half miles. These extensions are being proceeded

with this season. Offices were opened up on the new lines with appointments of agents as hereunder:—

On branch from Chicoutimi to St. Charles, thirty-seven miles.

St. Anne, agent and lineman, P. Gauthier, August 1, 1903.
Shipshaw, agent operator, Aug. Dufore, September 1, 1903.
Shipshaw North, agent operator, J. Murdock, September 1, 1903.
St. Léonard, agent operator, Geo. Gagnon, September 1, 1903.
St. Ambroise, agent operator, O. Grondin, September 1, 1903.
St. Charles, agent operator, B. Boucher, September 1, 1903.

On branch from St. Anne to Lac Claire, fifteen miles.

Range IX, agent operator, Thos. Simard, February 1, 1904.
Lac St. Charles, agent operator, J. Bouliane, January 1, 1904.
Lac Claire, agent operator, Albert Dufore, January 1, 1904.

On branch from St. Anne to St. Fulgence, nine miles.

St. Fulgence, agent operator, Rev. G. Gagnon, January 1, 1904.

On branch from St. Alexis to St. Catharines bay, seventy-eight miles.

St. Felix d'Otis, agent operator, Rev. H. Neron, November 1, 1903.
Petit Saguenay, agent operator, M. Tremblay, September 1, 1903.
Anse Cheval, agent operator, Price Bros., November 1, 1903.

The other two short lines that were mentioned as being in hand last year were constructed by day labour under the supervision of Mr. A. Boyer, and were in due course put in operation with appointments as hereunder.

On branch from Murray Bay to Trinity, fourteen and one-half miles.

St. Agnes, agent operator, Jas. Goudreault, January 1, 1904.
Trinity (Guay), agent operator, Jos. Guay, December 1, 1903.

On branch from Bay St. Paul to Petit Rivière, thirteen miles.

Petit Rivière, agent operator, J. Bouchard, December 1, 1903.

Repair sections.—Upon completion of the line spanning the gap between St. Etienne and Anse St. Jean, noted in last years report, it was found advisable to rearrange the repair sections of the North Shore system west of Bersimis, and the appointment of an additional lineman, J. Martel at Anse St. Jean, was made from May 1, 1904. The sections are now defined as hereunder :—

St. Anne-St. Charles, Ste. Anne-Lac Clair, Ste. Anne-St. Fulgence—Lineman, P. Gauthier, St. Anne.

Chicoutimi-St. Anne, Chicoutimi-St. Felix d'Otis, Chicoutimi-LaGalette—Lineman, J. Fortin, Chicoutimi.

Baie St. Paul-LaGalette, Baie St. Paul-Petit Rivière—Lineman, A. Gauthier, St. Urbain.

St. Felix d'Otis-Anse Cheval—Lineman, J. Martel, Anse St. Jean.

Murray Bay-Bay des Rochers, Murray Bay-Trinity (Guay)—Lineman, A. Brassard, Port au Persil.

Bay des Rochers-Bergeronnes, St. Catharines Bay-Anse Cheval, Tadousac-Sacre Cœur—Lineman, G. Bouliane, St. Catharines Bay.

Bergeronnes-Bersimis—Lineman, E. Courbron, Port Neuf.

Roadway clearances.—In consequence of an awkward growth of underbrush and trees obstructing the roadway skirted by the telegraph line between Port Neuf and Bersimis and elsewhere, provision is being made for a general clearance in the sections

where most called for, and it is intended to have this work taken in hand in the course of the ensuing year.

OFFICE CHANGES, &C.

At Baie St. Paul.—In connection with the operation of the new branch line to Petit Rivière a special allowance of $25 per year for repeating of messages and $12 per year for care of main battery is made to the agent Mr. F. Boivin.

At Murray Bay also in connection with the new branch line to St. Agnes and Guay a similar special allowance has been made.

At Escoumains arrangements were being made at the close of the fiscal year to open an accommodation office, apart from the regular one, at the mills of the Saguenay Lumber Company. Any commission, allowed on business handled, goes to the regular local agent.

Second wire Murray Bay—St. Catharines Bay.—In consequence of the congestion of traffic in this section a second wire was provided for and the work of putting it up was in hand at the close of the fiscal year, under the foremanship of the general lineman, Mr. A. Brassard in that section. This new wire in conjunction with the special one some time ago, provided by the Great North Western Telegraph Company, west of Murray Bay, affords a direct and unincumbered circuit for the north shore line extending down beyond the river Saguenay.

North Sshore St. Lawrence (East of Bersimis)—Godbout section.—The cable between Manicouagan and Godbout, 26 nautical miles, mentioned in last year's report as having been put in order on April 22, 1903, became interrupted again on December 1, 1903. Local examination indicated the trouble to be on the Manicouagan shoals, but the ice already formed was too heavy to admit of any attempt being made to get at it, and action had to be deferred.

In the month of April following, a further examination was made resulting in the conclusion that the trouble was in more than one place and some of it in deep water, rendering a repair impracticable until the cable ship would be available for the purpose. Meanwhile, however, with the exception noted below, there was no interruption of traffic, as the business with offices on the North shore below Manicouagan, was exchanged via the Long Point—Anticosti—Gaspé cable stretches in a satisfactory manner. (Note.—This service continued throughout the entire season until the Godbout-Manicouagan section of the Godbout-Bersimis landline that was in contemplation last year, was completed November 3, 1904, when direct communication between Quebec and the offices down the coast was re-established. There was a break in this service, however, of three weeks from July 16 till August 4, 1904, during an interruption of the Long Point-Anticosti cable, attended to by the ss. 'Tyrian.' In that interval, messages were handled by a boat service established between Manicouagan and Godbout for exchanges as frequently as were found needful.)

Alternative landline connection.—In pursuance of what was stated in last year's report an appropriation was obtained for the construction of a landline between Bersimis and Godbout, a distance of about 80 miles. A supply of cedar poles 20 feet long and 6 inches across the top corresponding to those elsewhere used along the coast was contracted for with Messrs. J. & N. Tremblay, of Chicoutimi, and deliveries were being completed at the close of the fiscal year. It was decided to answer every purpose best to have the work done by day labour with the foremanship of experienced hands instead of having it done under contract.

Note.—Arrangements were made accordingly, and as soon as the material was delivered, the work, with Mr. Aurelien Boyer as superintendent of construction, was taken in hand in three separate sections by gangs in charge of Messrs. N. A. Comeau, F. Gallienne, and Fidele Cormier. The work had so far progressed by November 3, when it was discontinued till next season, that connection was made that date at

Scougall's Mills with the existing landline stretch of the cable route ; thus affording through communication for the offices below with Quebec, as has been already noted above. The new line when carried on beyond Scougall's Mills, will go west and south to Bersimis, and the landline stretch at present on Manicouagan, between Point Outardes and Scougall's Mills may be operated as a branch from the latter place in event of discontinuance of use of the cables.

Pathway clearances and general repairs, &c., below Manicouagan.—In the autumn of 1903, some work was done in clearing trees and undergrowth and renewing bridges along the line between Little River and Moisie and between Moisie and Seven Islands; the general repairs to the line as were called for were made along the section between Point des Monts and Thunder river by the general repairer on that division with a gang locally engaged for the purpose. The other sections below were attended to by the local linemen and inspectors according to the arrangements made to this end as mentioned in the last annual report. In this connection, aid to the extent of $50 each was agreed upon towards the special provision of buildings for the repair stations established at *Pigou, Betchouains, Musquaro, and Baie des Ha.*

For the use of Inspector P. C. Vignault, in his journeying along the coast in his section between St. Augustine and Chateau Bay, a small yacht was provided in August, 1903.

New Offices and Office Changes.

At Point aux Anglais.—The accommodation office was closed May 21, 1903, and re-opened again for the winter on October 26, 1903.

At Pentecost, where the district superintendent of the line below Bersimis is located, an appointment of an assistant operator, Mrs. E. H. Têtu, was made dating from May 1, 1904.

At Clarke City the accommodation office was closed November 6, 1903, and was reopened for the summer on April 17, 1904.

At Moisie.—The accommodation office in the premises of Messrs. Holliday Bros., apart from the regular office, and designated Moisie East, that was opened for the convenience of the firm in May, 1902, was closed on October 16 following, and re-opened June 1, 1903; closed September 16, 1903, and reopened again May 9, 1904.

At Pigou.—Half way between Moisie and Little River an office was opened on October 1, 1902, with Mrs. P. Wright as operator and Peter Wright as local lineman.

At Watichou, the former agent, Mr. Saltsman, withdrew, and the office was closed September 4, 1903. It was re-opened on December 1 following with Mrs. Clorinde Bourque as operator and John Bourque as local lineman. This office is in the premises of Mr. J. Beetz.

At Rocky Bay, the former agent, Mr. W. Kennedy retired, and the office was closed September 6, 1903; is was re-opened April 20, 1904, with Miss B. E. Chevelier as operator, and L. O. Chevelier, local lineman.

At Chateau Bay.—In consequence of the local agent having the Marconi station to attend to in addition to the landline and Belle Isle cable circuit, the services of a local lineman, John McCarthy, for the Chateau Bay-Green Bay section, a length of about 22 miles, were temporarily engaged from November 1, 1903.

Automatic repeaters.—Owing to the number of offices along the north shore and the very considerable distances covered by the line, it was found advisable to divide the circuit in sections and operate them through automatic repeaters. A set of the latter was installed at Bersimis two or three years ago, and facilitated the handling of business between Quebec and the offices below as far as Long Point, where the messages are repeated manually between the east and west ; and a set was put in operation at Mutton bay in January last (1904), whereby direct communication is had between Chateau Bay, the terminal station of the landline, and Long Point. At the latter office a

set of button repeaters is provided whereby the Anticosti cable circuit from Gaspé; can be put through to Quebec or to Chateau bay, as may be required on occasion. This arrangement proved very advantageous during the present year in the handling of the north shore traffic via Gaspé, in consequence of the interruption of the Godbout-Manicouagan cable as elsewhere mentioned.

Belle Isle Cable.—The cable between Chateau Bay and Belle Isle, which was put in working order on August 29, 1903, as mentioned in last year's report, became interrupted again on June 23, 1904, probably due to icebergs, as on the last occasion. Communication is maintained by means of the Marconi wireless stations, which have been regularly in operation under the conditions described in last year's report.

[Note.—The ss. 'Tyrian' proceeded to the straits to make a repair of this cable in October, 1904, but was obliged to leave it in consequence of the lateness of the season and continuous stormy weather, rendering operations impossible. The Marconi stations are counted upon to answer every purpose pending the restoration of the cable connection next season.]

Isle aux Coudres Telephone System.—The cable between the island and the mainland at Les Eboulements was damaged by ice and rendered unworkable on February 1, 1904, and could not be got at for repairs until May, when communication was restored. The repairing of this cable is undertaken by the department as an aid towards the operation of a local telephone system, and a payment to the extent of $150 per year towards the maintenance of the line on Isle aux Coudres, is also made to the proprietor of the system, Mr. H. Lemieux, of Murray Bay.

Grosse Isle Quarantine Line.—On April 4, 1904, this line became defective below St. François; an examination was made at Isle Reaux as early as possible, and the trouble was found to be in the cable stretch between that place and St. François. Intermittent communication was had with Grosse Isle, and it improved after some handling of the cable at St. François shore, where finally the cable was found to have been crushed by ice. It was put in good order in the course of the summer and arrangements were made to have the shore length re-cemented in the rocks from which it had been dislodged.

At St. Famille, on a loop line from St. Jean, an office was opened on April 2, 1904, with Mr. P. O. Latourneau as agent-operator, on the usual allowance of 25 per cent of the government line tolls, guaranteed at the rate of $50 per year.

This loop or 2-wire line, was for most part built by local labour under the direction of Mr. A. Boyer, early in the winter of 1903, and was completed by Mr. P. Pouliot, agent at St. Jean, in the following spring. It extends along a roadway across the island a distance of 5½ miles. Cedar poles 25 feet long, procured at St. Anne de Beaupré, No. 6 galvanized iron wire, and white porcelain insulators, were used in the construction.

ONTARIO.

Pelee Island Line.—In the absence of an available fund for the purpose of making the contemplated change in the track of the cable with a view to its betterment, there was some delay attending an attempt to restore communication after the break reported last year as having occurred on May 19, 1903. However, on the approach of winter it was thought well to make another attempt to put it in working order; and Mr. J. A. Parr, of the head office staff, proceeded to Leamington, and in conjunction with the district superintendent, Mr. J. McR. Selkirk, undertook the task with the aid of a steam tug early in November. They experienced a great deal of bad weather and after succeeding in getting the cable clear from both sides to within a space of a mile midway of the stretch (17 knots from Leamington dock to North Point, Pelee Island)

they were obliged to stop the work because of the presence of ice and danger therefrom to the boat employed. Further action was thereupon (December 9) deferred till the present season. In June this year (1904), Mr. Selkirk resumed operations where the work had been left off and succeeded in restoring communication on the 16th. Provision is being made for the coming year whereby some action may possibly be decided upon with a view to a safer working condition of this cable : but it is very questionable whether there is any advantageous choice in the location of it, as the whole neighbourhood presents the liability of interference from vessels' anchors.

NORTH WEST.

CONSTRUCTION OF NEW LINES.—Under appropriations that were made for the purpose last session there was a considerable amount of construction work in hand by day labour under the direction of the district superintendent, Mr. J. S. Macdonald, at the close of the fiscal year. Already, in anticipation of a vote for the purpose, a 2-wire branch forming a loop off the main line from a point between Pitt and Onion Lake was carried a distance of 22 miles to connect with the new settlement of Lloydminster. It was completed and put in operation on April 18, 1904, with Miss E. McCleneghan as agent-operator. In the construction of this line, native wood obtained from the nearest available sources along the route was used for poles and the other material consisted of No. 6 galvanized iron wire (a quantity of that size being on hand and available at the time) white porcelain insulators and oak brackets. A special building was put up for the accommodation of the office.

Willow Bunch.—For the extension to this place, 38 miles from Wood Mountain, mention of which was made in last year's report, a supply of tamarack poles 25 feet long, to admit of their being reset in course of time, were obtained at Prince Albert and hauled over the prairie from the railway at Moose Jaw.

NOTE.—The work of construction of this line was delayed for a time by wet weather, but it was completed and put in operation, with H. A. Noel, agent, October 19, this year (1904).

The wire used in this and all of the other lines mentioned hereunder was No. 8 galvanized iron with white porcelain insulators and oak brackets. A special building for the accommodation of the office is being arranged for.

Edmonton to Athabasca Landing.—(96 miles), a line was also in hand for this connection and followed an existing roadway. Poles were obtained along the route. No. 8 galvanized iron wire, &c., as above were used in the construction. [Note.—This line was finished and put in operation on October 1 (1904), with Jas. McKernan as agent-operator]. A special building for the office had to be provided.

Edmonton-Indian Agency, Spruce Grove and Stony Plain.—Provision was made last year for the construction of a telephone line between Edmonton and Edmonton Indian agency, a distance of 14 miles ; the poles to be supplied along the route by the local residents. While this work was in hand the extension of it to Spruce Grove, 5 miles, and further to Stony Plain, 5 miles, in all, 24 miles, was decided upon. No. 8 galvanized iron wire, &c. as above, were used in the construction. [Note.—Telephone apparatus has been provided and this line will be in operation before the close of the present year (1904)].

Andrew.—Four and a half miles off the main line from Victoria, Alberta has been connected by a loop constructed under an appropriation provided for the purpose last year. Poles were obtained from nearest sources along the route and No. 8 galvanized iron wire, &c., were used in the work. An office was opened with Mr. A. K. Morrison as agent-operator on June 7, 1904.

At Edmonton.—The office (joint with C. P. Tel.) was removed September 1, 1903, from the premises formerly occupied to more convenient and commodious quarters in a new building erected by Messrs. D. R. Fraser & Co.

At Pitt.—An office was opened temporarily on May 1, 1904, in charge of Mr. W. A. McClenighan, of Onion Lake, in the interest of the Department of Immigration. (This office was again closed August 6, 1904.)

At Clark's Crossing, the point of departure from off the main line of a loop 14 miles to Saskatoon, an office was temporarily established for the accommodation of the Canadian Northern Railway for the month of July, 1903.

At Humboldt the office and repairs station discontinued in 1893, is to be re-opened, and arrangements are in hand for the erection of a building at that place for the purpose.

Transfers of Agents and Linemen.—Several changes were made in the location of members of the staff on the North-west lines in the course of the present year, and will be found noted in a tabular statement in the appendix to this report.

Old Telephone Line, Lethbridge-Cardston.—Provision was made last year for the reconstruction of the Spring Coulee-Cardston section (16 miles) of this line which was built, in all 57 miles, in 1894, and subsequently paralleled between Lethbridge and Spring Coulee. No action has been called for, however, as the local system of the Bell Telephone Company has lately covered the ground.

Shifting of line to highway.—As mentioned under the head of *Wood Mountain line* in last years' report, action was being taken in the matter of shifting the telegraph line in places from its original location to the road allowances on highways of late provided. To this end material for an aggregate reconstruction of 7 miles was sent to Moose Jaw and to Qu'Appelle for the same purposes north of that point, an aggregate of 6 miles ; the work to be done incidentally to general repairs, &c., as early as practicable after the roadways have been surveyed and definitely located.

In the course of construction of the Edmonton-Athabasca Landing line, which was carried on the north side of the river, parallel with the old line between Edmonton and Fort Saskatchewan, 24 miles, it was found expedient to discard the later stretch as it would soon need renewal, and to shift the wire to the new pole line on the north side. A second wire for this purpose was strung on the new pole line and the old wire on the south side was afterwards removed.

Renewals of Poles.—An examination of the lines throughout has been made in the course of the present season with the result that some renewals of the poles in places is found to be called for. Provision to this end will be made in the course of the coming winter so that the necessary work may be done next season.

Banff Park Telephone System.—An inspection of this system has been made by the District Superintendent, and with a view to improving the service and enhancing its usefulness some further extension and renewal of equipment next season has been provided for.

BRITISH COLUMBIA.

Alberni-Clayoquot line.—There is nothing special to record as to the upkeep and operation of this line throughout the year.

Repair Sections.—As noted in the tabular statement appended to this report, *New Alberni* is but the post office address of the lineman, E. B. Girard. He is stationed at Uchuclesit midway between Franklin Creek and Pipestem inlet and looks after that section. The stretch between Alberni and Franklin Creek is kept in order incidentally with the Canadian Pacific telegraph wire strung on the same poles.

At New Alberni or Alberni wharf.—An office was opened on commission with Mr. A. E. Waterhouse as agent operator on October 1, 1903.

At Clayoquot a deed of two lots of land within the townsite was made by local residents to the Honourable the Minister of Public Works for the purpose of the tele-

graph service and thereupon in November, 1903, a small building for the accommodation of the office was erected.

Alberni-Cape Beale line.—The section, with the line to Parkville from Alberni, is being maintained and operated in conjunction with the Canadian Pacific telegraph extension to Bamfield Creek, as mentioned in the annual report for 1901-1902.

Nanaimo-Comox line.—The maintenance in satisfactory operation of this line has been conducted under the conditions mentioned in last years report. There has been no change in staff or otherwise called for in the interval.

Victoria-Cape Beale line.—Conditions of maintenance and operation have continued as mentioned in the last annual report. The only change to be noted is the appointment of E. C. Williams as agent operator and W. G. H. Ellison as lineman both at *Port Renfrew* in place of B. H. Kirkpatrick, former agent and repairer, resigned September 22, 1903.

At Port Renfrew, following upon the above mentioned withdrawal of Mr. B. H. Kirkpatrick, the building with lot formerly owned and occupied by him as an office and dwelling was purchased by the department.

At Jordon River (Shirley).—Percy Clarke was appointed agent lineman on December 1, 1903, in place of J. Goudie, resigned.

Kamloops-Nicola Telephone line.—Under a special appropriation that was made for the purpose, there was a considerable amount of resetting of the poles in places along this line done in the course of the season of 1903; and for the readier attention to the removal of trouble liable to occur in consequence of the decaying condition of the poles generally, the District Superintendent, Mr. W. Henderson, made arrangements whereby at the cost only of time taken up on occasion by the work called for, the upkeep of the line was undertaken in sections by several of the subscribers at the established stations as hereunder:—

	Miles.
Kamloops-Anderson Creek, C. S. Stevens, Kamloops	12
Anderson Creek-Stump Lake, T. Bullman, Stump Lake	13
Stump Lake-Quelchena, E. O'Rourke, Quelchena	20
Quelchena-Nicola Lake, A. E. House, Nicola Lake	9
Nicola Lake-Lower Nicola, G. Armstrong, Lower Nicola	13
Total	67

The appointment of Mr. C. S. Stevens as general repairer for the whole line, and to have the local agency at Kamloops, was subsequently made and he took charge from June 1, 1904, connection being made with the Central Telephone office instead of with the Canadian Pacific telegraph office as formerly.

[Note.—As the result of a recent inspection made by Mr. J. G. Brown of the district superintendent's office (August, 1904) the need for an early renewal of the poles along the whole length of this line, which was built in 1899, has been ascertained; and provision to this end will be made in the estimates for the coming year.]

Golden-Windermere line.—Owing to some unsatisfactory experience in the operation of this line at times in the course of the year, some changes were decided upon in the disposition of staff and it is expected that as now provided for the requirement will be more advantageously served. The present arrangement is as hereunder:—

Golden (66 miles), telegraph, C. E. Wells, agent-operator.

Spillimacheen, telegraph, V. F. Dunn, agent and lineman; telephone, J. E. McKay, subscriber.

Windermere (16 miles), telephone, commission office.

Athelmer (5 miles, looped back on pole line), telephone, commission office.

Wilmer (5 miles), telegraph and telephone, R. A. Power, agent and lineman.

The dual service, telegraph and telephone is locally considered to best answer the purposes of the community.

Salt Spring Island Telephone Line.—This line, as mentioned in last year's report, extended from Duncan Station on Vancouver island, to Edwards' store, Salt Spring island; the further extension, 9 miles to Ganges Harbour, was provided for and carried out in March, 1904. An inspection of the whole line, now measuring 24 miles of land-line and ¾-mile cable, was recently made, and it was found in a satisfactory condition. A still further extension of 3 miles beyond Ganges Harbour to Vesuvius Bay, on the island, is being provided for.

[Note.—On July 23, 1904, an interruption occurred in the cable section across the Sanson narrows. On examination it was found to be wasted away by rust and abrasion for as much of its length as was overhauled, and a new length of 1¼ miles, calculated to lay clear of rocks in the old track, is called for, and a sum therefor will be included in the estimates for the coming year.]

YUKON.

(This division includes the Ashcroft-Quesnelle line and branches.)

Throughout the year no other line work has been called for beyond what was attended to by the regular staff.

Such staff changes, &c., as have been made since the list of offices accompanying the last annual report was compiled, are noted in the revised list, or tabular statement, in the appendix hereto.

Branch Line Repairs.—The branch lines from Quesnelle to Barkerville, 61 miles; and Ashcroft to Lillooet, 62 miles; having been found to need some general overhauling and resetting of poles, provision is being made for the performance of that work before the close of the present year (1904).

Establishment of New Offices.

At Cache Creek, 4 miles from Ashcroft, an office was opened December 22, 1903, to be operated on commission.

At Lafontaine, 45 miles from Quesnelle, on the Barkerville branch, an accommodation office was opened on February 17, 1904, for the convenience of the Caribou Consol Company, and several other mining camps in the neighbourhood.

At Lorne Creek, 22 miles from the Skeena canyon, on the Port Simpson branch, an office was opened on April 30, 1904, with A. J. West as agent-operator.

Decease of Members of Staff.—Advices reached the department of the deacease of Mr. F. B. Gorrell, who occupied the position of agent-operator at Pike river, near Atlin, in February, 1904; and of the sad loss by accidental drowning of Mr. W. S. Lanktree, agent-operator at Yukon Crossing, between Five Fingers and Fort Selkirk, on June 9, 1904.

Alaskan Connections.—On August 24, 1903, communication was established by the United States military telegraph between St. Michael and Boundary, the terminal station of the Yukon line, whence a connection had already been in opration to Valdes.

The following notes in connection with the Yukon line were intended to be included in the body of the report submitted last year (1902-03) :—

Maintenance Expenditure.—In addition to the salaries given in the list of staff, there is made at all points beyond Quesnelle an allowance of provisions to each person

to the value of $30 and upwards per month; or a cash equivalent, according to the remoteness of the stations from basis of supplies.

A reasonable explanation of this very considerable outlay is found in the circumstance that these arrangements for staff, although costly, are, so far as can be made out at present, only such as are calculated to afford a satisfactory service, and as a result although the line is a very long one, upwards all told of two thousand miles, a great part of it through a woody wilderness and consequently liable to constantly recurring interruptions, the business handled suffers no appreciable delay in transmission, the operators employed being sufficiently expert to keep it moving, as communication in times of line trouble happens to become re-established from point to point of the system.

As time goes on the liability of the line to interruptions should lessen, owing to its weaknesses being found and eliminated, and it ought soon to be practicable to reduce the number of linemen required to keep it in repair, in which case the maintenance outlay would be a good deal less than it is at present.

Traffic receipts.—For all that a reduction to two-thirds of the original through rates for messages, was made from June 1, 1902, the returns show an appreciable increase in the traffic and actual revenue as follows :—

12 months		Messages sent.	Revenue.*
July-June	1901-02	33,136	$105,591 69
"	1902-03	41,447	113,721 44

Supplementary Report.—An interesting report, with a very satisfactory showing, from the acting superintendent of the Yukon system, Mr. J. Y. Rochester, at Vancouver, will be found elsewhere in the following pages.

* These are the actual figures for the period covered ; the amounts set down in the tabular statements of Revenue and expenditure elsewhere in these annual reports, comprehend only what was brought to account to the end of the fiscal year in each instance, without regard to whatever balances of the traffic receipts may have been left over for subsequent entries.

REVENUE AND EXPENDITURE.

The revenue and expenditure for each of the lines in the several districts hereinbefore mentioned are given in the following table :—

1903-04.	Expenditure.	Revenue.	Remarks.
	$ cts.	$ cts.	
Lower St. Lawrence and Maritime Provinces :—			
Anticosti lines	* 7,930 09	1,690 78	
Bay of Fundy	1,676 15	675 25	
Cape Ray	250 00		
Escuminac	411 92	161 34	
Magdalen Islands	3,111 48	831 91	
Cape Breton lines	6,972 23	1,802 34	
North Shore (E.B.)	† 17,341 83	3,579 08	
" (W.B.)	5,680 08	1,885 59	
Quarantine system	2,157 59	464 48	
Isle Coudres line	150 00		
Belle Isle-Chateau Bay :—			
Marconi system	188 71		
Cable ship *Tyrian* :—			
Maintenance and renewal of plant	23,348 63		
Subsidies, stationery, line and office material and contingencies	14,125 68		
Total for Lower St. Lawrence, &c.	83,444 39	11,090 77	Signal Service messages, Meteorological Service messages, reports and Fisheries bulletins are handled free of tolls.
Ontario :—			
Pelee Island line	‡ 2,301 52	35 20	
North-west Territories lines	19,938 62	4,916 94	
British Columbia—			
Alberni-Cape Beale	483 00	13 56	
Alberni-Clayoquot	3,888 42	265 73	
Golden-Windermere	3,622 75	589 10	
Kamloops-Nicola	1,364 32	672 70	
Nanaimo-Comox (including Alberni line)	3,725 23	2,452 33	
Vancouver-Salt Spring	264 62	29 08	
Victoria-Cape Beale	5,604 53	334 56	
B. C. service generally	749 07		
Yukon :—			
Ashcroft-Dawson	199,226 14	126,991 97	
Telegraph service generally	3,305 04		
Total	327,917 65	147,391 94	

* Of this $2,388.41 was for renewals.
† " $3,619.87 " roadways, &c.
‡ " $2,119.25 " cable repairs.
" $752 62 " pole re-setting, &c.

TELEGRAPH SERVICE GENERALLY.

Cable Ship —The s.s. *Tyrian* in command of Captain T. O'Leary with Mr. R. G. Zwicker, chief engineer ; Mr. W. McConnell, pilot ; and the other officers and members of the crew for most part the same as last year, was got in readiness early in the season starting out from Halifax on March 26, (1904), under an engagement with the Direct U.S. Cable Company in the same way as in the month of December previous, as noted in last year's report, for the repair of a break in their cable off Shelburne, N.S.; and after a successful outing returned to port on May 4. She left again on the 18th of that month for the repair of the Magdalen Islands cable, being joined by Mr. A. B. Macdonald at Meat Cove who accompanied her in the capacity of electrician upon that occasion and subsequently throughout the season in connection with the

other repairs of which mention is made elsewhere in this report. The operations of the ship were expeditious and attended with great success and satisfaction.

Telegraph Systems of the Dominion—As a matter of general interest the latest figures to hand showing the extent of telegraph lines in operation in the Dominion are given hereunder :—

Canada.	Length of lines in Miles.			Lengths of Conductors in Miles.			Number of offices.
	Aerial.	Underground.	Total.	Aerial.	Underground.	Total.	
Great North Western Telegraph Co.	18,286	.....	18,286	35,721	.....	35,721	1,455
Canadian Pacific Telegraphs	10,016	2	10,018	45,886	57	45,943	1,152
Western Union Telegraph Co.	2,756	28	2,784	13,025	44	13,069	221
Government Telegraph Service.	6,270	.....	6,270	6,270	.....	6,270	327

DEPARTMENTAL TELEPHONE SERVICE.

At the end of June, 1904, the telephone connections with the central office of the Bell Telephone Company at Ottawa, listed as chargeable to the special appropriation, numbered 240 the annual charge for which amounts to $9,396.50. The connections are distributed amongst the several departments as hereunder :—

Department.	Offices.	Residences.	Annual charge.
			$ cts.
Agriculture	6	3	360 00
Auditor General	2	1	115 00
Census Branch	2	2	163 00
Customs	5	2	275 00
Dominion Police	6	2	313 00
Exchequer Court	1	1	85 00
Finance	3	2	203 00
Governor General	4	3	308 00
Houses of Commons	13	3	607 50
Indian Affairs	2	1	110 00
Inland Revenue	4	5	380 00
Interior (including line to observatory)	23	3	980 00
Geological Survey	2	1	110 00
Justice	5	10	570 00
Labour Department	1	..	50 00
Mounted Police	3	1	145 00
Marine and Fisheries	8	5	482 00
Militia and Defence	11	8	734 00
Parliamentary Library	1	2	120 00
Privy Council	3	5	325 00
Post office Department	6	4	380 00
Public Works	26	13	1,640 00
Printing and Stationery	3	2	175 00
Railways and Canals	3	4	265 00
Secretary of State	3	2	180 00
Senate	3	1	140 00
Trade and Commerce	2	3	180 00
	151	89	9,396 50

APPENDED TABLES.

The usual tabular statements of the lines and offices, staff, &c., of the telegraph service, following hereupon, will be found to contain whatever additions or changes have been made up to June 30, 1904.

D. H. KEELEY,
General Superintendent.

OTTAWA, December 9, 1904.

DOMINION TELEGRAPH SERVICE.

Newfoundland Telegraph Service.

No.	Stations.	Intermediate Distance.	Agent and Operator.	Memo.
		Miles.	$ cts.	
1	Port au Basque	0	50 00 on commission	N.B. The commission is 25 per cent upon all business to and from the office; said commission guaranted not to be less than at the rate of $50 per annum.
2	Cape Ray Lighthouse	14	50 00 "	
	Totals	14	100 00	

N.B.—The above short line is constructed in connection with the Signal Service, and connects at Port au Basque with the land line system of the Anglo-American Telegraph Company.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

ANTICOSTI TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Fox Bay	0	Geo. Cabot	300 00	May 13, 1900	Increased from $200 since December 1902.
2	Heath Point	23	A. Tremblay	50 00 or commission.	Aug. 1, 1900	For local agency.
			"	200 00 "	Nov. 1, 1902	For cable repeating station.
3	South Point Lighthouse	32½	E. Leprise	50 00 "	July 1, 1903	
4	Shallop Creek	17½	B. Bradley	240 00 "	" 7, 1881	
5	Salt Lake	52½	A. Allard, agt.repairer	360 00 "	June 1, 1903	Plus $1 per day when on duty as general repairer.
6	South-west Pt. Lighthouse	15	A. Z. Lemieux	420 00 "	" 1, 1901	Increase from $300 since May 1903.
....	Jupiter River	7		50 00 "		
....	Otter River	17½		50 00 "		
....	Beescie River	22		50 00 "		
....	Cape Eagle (Ellis Bay)	10		50 00 "		
7	West Point Lighthouse	9	A. Malouin, dist. supt.	344 00 per annum	Aug. 1, 1900	
			" operator	50 00 "	" 10, 1881	
8	English Bay	3	F. Cabot	120 00 and commission	July 1, 1882	
....	Mechastic Bay (cable landing)	14½				
	Totals	223¼		2,334 00		

South-west Point connects with l'Anse à Fougère, Gaspé, by cable 44¼ knots; and from Mechastic Bay connection is made with Long Point of Mingan by cable 21 knots.

0	L'Anse à Fougère		Thos. Dupuis	17 00		Special allowance for the cable terminus. A testing station only*.
1	Gaspé Basin	28	J. J. Annett	540 00	Oct. 16, 1881	Transfer office. Connection with C.N.W. telegraph system. The salary was $420 per year previous to December 1, 1903.
		28		557 00		

*This payment was made to Mr. N. Bernier prior to October, 1903.

MAGDALEN ISLANDS SYSTEM.

Magdalen Islands Section.

1	Amherst	0	Miss J. Shea	50 00 or commission	Oct.	1, 1882	The commission is 25 per cent on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of $50 per annum.
2	Amherst Lighthouse	9	Wm. Cormier	50 00 "	June	11, 1881	
3	Etang du Nord village	15	I.G. Binet, gen. repairer	460 00 "	Dec.	1, 1900	Plus $1 per day when absent on duty.
			Mrs. A. Binet	50 00 "	"	1, 1881	
4	Etang du Nord Lighthouse	1	N. Arseneault	50 00 "	Sept.	1, 1891	Two-wire loop line.
5	Grindstone Island	5	W. Leslie	Commission 25 p.c	May	20, 1897	
6	Grindstone West		A. LeBourdais, dis supt	720 00	Aug.	17, 1880	Plus $1 per day when absent on duty. The salary was $600 per annum prior to May 1, 1901.
			Mrs. LeBourdais, oper.	50 00	Sept.	15, 1893	
7	House Harbour ($\frac{1}{2}$ knot cable)*	3	Camille Delaney	50 00 or commission	June	1, 1903	
8	Wolfe Island	28½					
9	Grosse Isle	11	N. Clark	360 00 or commission	June	1, 1888	For repeating station. Prior to Dec. 1, '02 the allowance was $200 and commission for local agency.
			J. Quinn	56 00 "	Dec.	1, 1902	
10	Grand Entry	11	Mrs. F. Atkins	50 00 "	Feb.	18, 1882	
		83½		1,880 00			
11	*Point Bass—2 Wire loop from House Harbour	4	H. Arseneau	50 00 or commission	Aug.	1, 1902	
12	Bryon Island	1	W. Dingwell	150 00	Jan.	1, 1903	Two-wire loop line from terminal hut for Grosse Isle and Anticosti cables.

Grosse Isle connects at Old Harry with Meat Cove, C.B., by cable 55 knots; and connects with Bryon Island by cable 11 knots; thence to Heath Point Anticosti 93 knots.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CAPE BRETON SECTION.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1*	Meat Cove (cable station)		A. B. McDonal, Circuit Manager	720 00	Nov. 7, 1880	The commission is 25 p.c. on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of $50 per annum.
2	Aspy Bay	10½	I. Y. Nichols	50 00 or commission	July 1, 1894.	
3	Dingwall (loop line)	3¾ / 2¾	Murdock McLeod	50 00 "	Aug. 31, 1898.	The loop line formerly running to White Point has been withdrawn
4	Cape North (Inland)	3	John McDonald	50 00 "	May 13, 1904.	
5	Neil's Harbour (half-way house loop line)	11 / 13	M. McLeod	50 00 "	April 1, 1887.	
6	Ingonish North Bay	9	Mrs. S. S. Burke	50 00 "	June 1, 1884.	Former Agent J. M. Burke deceased.
7	South Ingonish	10½	Geo. Brewer	50 00 "	May 7, 1899.	
8	Ingonish Ferry	2	G. H. Hackett	50 00 "	June 29, 1903.	
9	French River ¼ knot cable	21	John McDonald	50 00 "	April 1, 1899.	
10	Indian Brook	5	Annie McDonald	50 00 "	Aug. 1, 1901.	
11	Murray (loop line)	14 / 10	R. B. Matheson	25 p.c. R & Cks	Jan. 20, 1902.	25 per cent commission only.
12	Englishtown ¼ knot cable	7	W. Bingham	120 00 and commiss.	July 19, 1882.	Switching point for Baddeck line.
	South Gut, St. Ann's (on loop)	5		50 00 "		Closed December 31, 1899.
13	Baddeck (on loop)	13	L. M. Anderson	100 00 "	June 17, 1904.	Salary.—$120 per year previous to this appointment. Former Agent Mr. L. M. Anderson.
	Englishtown (back on loop)	18				This loop to Baddeck starts from and returns to Englishtown.
14	Kelley's Cove, N. Campbellton	6	J. S. Burchell	50 00 or commission	July 7, 1904.	
15	Big Bras d'Or ¼ knot cable	2½	Mrs. E. Livingston	50 00 "	Jan. 1, 1889.	
16	North Sydney	12½	W. U. Tel. Co	Commis'n only		The commission is 50 p.c. on local business and 25 p.c. on through messages; and covers supervision of line and office accommodation at North Sydney.
	Repairers' Sections.					
	Meat Cove—Sugar Loaf		M. McAskill	80 00	April 1, 1898.	
	Sugar Loaf—Ingonish		Charles Smith	100 00 "	" 1, 1898.	Increased from $80 since June 1, 1903.
	Ingonish—Englishtown		R. A. McDonald	80 00 "	" 1, 1898.	
	Englishtown—Baddeck			"	" 1, 1898.	This section attended to on occasion by locally employed labour since July 1, 1902.
	Englishtown—N. Sydney		Dan Campbell	100 00	July 14, 1903.	
	Murray—Indian Brook		John Smith	25 00	June 17, 1902.	
	Ingonish		S. S. Burke, gen. repr	120 00	April 1, 1904.	Payment includes horsehire.
	Totals	168		2,345 00		

Meat Cove station connects with the Magdalen Islands system by a cable to Old Harry Head, 55 knots, and with St. Paul's Island by a cable of 20 knots. The latter is operated with telephones.

1	St. Paul's Island	3	S. C. Campbell	50 00	Oct. 1, 1890.	Land wire across the island, Atlantic Cove to Trinity Cove.

MABOU-CHETICAMP AND MEAT COVE, C.B., TELEGRAPH SYSTEM.

1	Mabou	0	Mrs. M. McDonald	120 00 per annum	April 1, 1887.	The commission is 25 p.c of the Government line tolls, and is guaranteed to amount to not less than $50 per annum. Where 50 p.c. commission is paid there is no guarantee as to amount.
2	Inverness Town (Broad Cove)	20	Miss Annie McLelland	50 p.c. Cks & Rts	Mar. 1, 1892.	
3	South-west Margaree	12	J. D. McFarlane	50 00 per annum	*Feb. 1, 1898.	
4	Margaree Harbour	5	H. K. McLean	50 p.c. R. & Cks	Oct. 20, 1896.	
5	North-east Margaree (loop line wire)	10	Mrs. J. D. Ross	50 00 or commission	Feb. 1, 1898.	
6	Grand Etang	8	G. Doucet	50 00 "	Sept. 13, 1902.	This office re-opened after having been closed since January 1899.
7	Cheticamp	8	Mrs. M. Fiset	100 00 "	" 1, 1887.	*At South-west Margaree the commission was 50 p.c. till Sept. 1, 1899.
8	Pleasant Bay	27	Mrs. D. Smith	50 00 "	April 14, 1900.	
9	Cape St. Lawrence	15	C. Jamieson	50 00 "	Jan. 1, 1904.	
	Meat Cove	1	(See Meat Cove Line.) (D. C. Dawson, D. Supt.)	150 00 "	Jan. 1, 1887	
	Repairer's Sections					
	Mabou—Strathlorne		L. G. McDougall	40 00 per annum	Nov. 3, 1902	
	Strathlorne—S. W. Margaree		J. D. McFarlane	40 00 "	June 1, 1902	
	S. W. Margaree—Margaree Harbour		Alex. McFarlane, sr.	40 00 "	" 1, 1902.	
	Margaree Harbour—Grand Etang		H. K. McLean	25 00	" 1, 1903	
	Grand Etang—Cheticamp		Philip La Rade	25 00 "	May 20, 1903	
	Cheticamp—Barren		F. Aucoin	40 00 "	" 20, 1903	
	Barren Pleasant Bay		J. A. McLean	40 00 "	" 20, 1903	
	Pleasant Bay—Polits Cove		K. Fraser	40 00 "	" 20, 1903	
	Polits Cove—Halfway Shanty		E. Fraser	30 00 "	" 20, 1903	
	Halfway Shanty—Meat Cove		R. Fraser	40 00 "	" 20, 1903	
	General lineman		W. G. Smyth, Pt. Hood	120 00 "	July 1, 1903.	Salary covers horse-hire, &c.
	Totals	109		1,400 00		

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

NORTH SYDNEY—MEAT COVE AND PORT HAWKESBURY SECTION.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salary per annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
	Mabou	0				(See Mabou. Meat Cove section.)
1	Port Hood	10	D. J. McDonald	50 00	" 1, 1903	
2	Judique	10	Miss A. McPherson	50 00	" 1, 1903	
3	Craignish	8	J. D. Cameron	50 00	" 1, 1903	
4	Port Hastings	10	Miss M. McFarlane	50 00	" 1, 1903	
5	Port Hawkesbury	$3\frac{3}{4}$	Miss E. McDonald	120 00	" 1, 1903	
6	River Bourgeois	26	Angus Boyd	50 00	" 1, 1903	
7	St. Peters	6	D. Morrison	100 00	Nov. 1, 1903	Main Battery at St. Peters.
8	Lower Lardois ($\frac{1}{2}$ mile loop)	10	M. Bremner	50 00	" 1, 1903	
9	Grand River	$5\frac{3}{4}$	Miss Jessie Finlayson	50 00	" 1, 1903	
10	Fourchu	5	Miss May Hardy	50 00	" 1, 1903	
11	Gabarous (3 mile loop)	5	Miss C. Grant	180 00	Jan. 16, 1904	Repeating office.
12	Louisburg	4	Wesley Townsend	50 00	Feb. 1, 1904	
13	Main à Dieu	10	Miss Maud Dickson	50 00	June 1, 1904	$50 additional to Main à Dieu agency for care of main battery.
	To cable landing	1				
	Cable across channel	$1\frac{3}{4}$				
14	Scatarie Island (Western Light)		E. E. Pope	50 00	Aug. 15, 1904	
15	" (Eastern Light)	$7\frac{1}{2}$	J. T. Martel	50 00	" 1, 1904	
	General lineman Port Hawkesbury and Meat Cove Section		Wm. J. Smyth			(See Mabou. Meat Cove section.)
	Branch.					
	Gabarous		No appointments, only the terminal offices in operation.			This line was opened for business Dec. 11, 1903.
	Junction (wire only, 3 miles)					
	Marion Bridge	$35\frac{1}{2}$				
	Perry Lewis					
	Leitche's Creek					
	North Sydney					
	Totals	199		930 00		

North Sydney transfer office, connection with W. U. Telegraph system.

NOVA SCOTIA TELEGRAPH SYSTEM.

Cape Sable Section.

1	Barrington	0					This line has been leased to the Barrington Telephone Company from August 12, 1897. The lease is terminable at any time.
2	Newellton (including 1½ knots cable)	11					
3	Cape Sable Island light-house (including ¼ mile cable)	6¾					
	Totals	17¾					

East Coast Section.

N.B.—In connection with the Signal Service a land line, 208 miles in length, was erected in 1881, between Canso and Halifax, for a bonus of $16,000, and is maintained and operated by the Western Union Telegraph Company, without further cost to the Government.

BAY OF FUNDY, N.B., TELEGRAPH SYSTEM.

Grand Manan Section.

	Long Eddy Cable Hut to.						
1	Flagg's Cove	3	Mrs. C. C. Seely (D.Su.)	540 00	Nov. 18, 1880		*The commission is 25 p.c. on all business to and from the office in each instance; and commission guaranteed not to be less than at the rate of $50 per annum. When 50 p.c. commission is paid there is no guarantee as to amount.
	"		Miss V. A. McFarlane	50 00 or commission	Oct. 1, 1903		
	"		A. Gilmour, repairer	60 00	Dec. 1, 1894		
2	Castalia	2½	G. E. Dalzell	Commission 25 p.c	June 1, 1898		
3	Woodward's Cove	3½	W. A. Fraser	" 50 p.c	Feb. 28, 1893		
4	Grand Harbour	2	J. L. Newton	75 00 or commission	April 1, 1887		$25 per annum is included for repeating Whitehead branch.
5	Seal Cove	4½	J. Ingersoll	50 00 "	Sept. 22, 1899		
6	Southern Head Lighthouse	5½	O. McLaughlin	Commission 25 p.c	April 24, 1897		Southern head office is now operated by telephone from Seal Cove.
	Branch Line.						
	Grand Harbour	0					
7	Cheney's Island (½ knot cable)	4¾	W. Cheney	" 25 p.c	Feb. 1, 1891		
8	Whitehead Island (¾ knot cable)	1½	Mrs. W. Cassaboom	50 00 or commission	" 1, 1903		
	Cable, Long Eddy to Liberty Cove	7¼					
	Liberty Cove Cable Hut to.						
9	Welchpool	7½	Miss E. G. Vennell	240 00 and commission	Sept. 1, 1895		
	Cable across channel	1¾					
10	Eastport, Maine U.S.A.	¾	J. Cushing	200 00	Dec. 26, 1881		
	Totals	14¼		1,035 00			

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CHATHAM-ESCUMINAC, N.B., TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Chatham	0	Great North-western Telegraph Co.	185 00		This amount is paid for supervision of the line and office accommodation at Chatham.
2	Black Brook	5½	M. McDougall	50 00 or commission	July 1, 1904	The commission is 25 p.c. of the Government line tariff receipts in each instance, and is guaranteed to amount to not less than $50 per annum.
3	Baie du Vin	15	Mrs. M. Williston	50 00 "	Mar. 1, 1885	
4	Lower Hardwicke	6	Mrs. M. Brimner	50 00 "	Aug. 1, 1891	
5	Escuminac	3¾	D. Lewis	50 00 "	Sept. 1, 1885	
6	Point Escuminac lighthouse	12	K. R. McLennan	50 00 "	Nov. 1, 1893	$12 per annum allowed for care of main battery at Point Escuminac.
	Totals	42		435 00		

GROSSE ISLE QUARANTINE TELEGRAPH SYSTEM.

1	Quebec	0	Great North-western Telegraph Co.	185 00		This amount is paid for supervision of the line, and covers rent of pole line from Quebec to L'Ange Gardien, for which $35 per annum is charged.
	L'Ange Gardien	13				
	Orleans Island (cable)	¾				
2	St. Pierre	4½	C. Turcott	50 00 or commission	Mar. 1, 1885	This commission is 25 p.c. of the Government line tariff in each instance, and guaranteed to amount to not less than $50 per annum.
3	Ste. Petronille	3¼	M. Plante	50 00 "	April 7, 1896	
4	St. Laurent	6½	M. Gobeil	120 00 and 25 per cent commission	Sept. 15, 1888	
5	St. Jean	7	P. Pouliot	120 00 and 25 per cent commission	July 1, 1888	For local agency.
				180 00 per year	May 1, 1902	Chief operator and repairer.
6	St. François	6¾	O. Lemelin	50 00 or commission	" 15, 1900	
7	Isle Réaux (including 2 knots cable)	3¼				
	Isle Réaux (land line)	2½				
8	Grosse Isle quarantine office (including 2 knots cable)	3½	M. D. Masson	100 00 and 25 per cent commission	May 1, 1902	$4 per month for messenger serv. in summer, and $12 p. annum allowed for care of main batt. at Gr. Isle.
	Quarantine telephone system 2 wire line	1¾				NOTE. The telephone system on Grosse Isle since May, 1893, has comprised 1¾ miles of 2 wire line with 11 connections or stations.
	Totals	52¾		1,155 00		

	Loop Line (2 wires.)						
	St. Jean-St. Famille	5½	P. Letourneau	50 00 or commission	April	2, 1904	

CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM.

Chicoutimi Section.

1	Bay St. Paul		F. Boivin	180 00 per annum.. { 25 p.c. commission	{ Previous to April 1, 1885		* The commission on business is 25 per cent of the Government tolls of the line; the amount guaranteed to be not less than $50 per annum.
2	St. Urbain	9	{ A. Boivin { A. Gauthier, repairer	{ 50 00 or commissi'n* 210 00	" May	1, 1885 15, 1887	
3	La Galette	37	S. Ouellette	100 00	Aug.	25, 1902	
4	St. Alexis	37½	Mrs. D. Simard	50 00 or commission	Nov.	1, 1899	Plus $25 per year for operating branch line to L'Anse St. Jean.
5	St. Alphonse de Bagotville	3	A. Simard	50 00 "	April	1885	
6	Chicoutimi	14½	{ G.N.W. Telegraph C. { J. Fortin, repairer	{ 25 p.c. commission 120 00 per annum	Nov. June	1893 1, 1897	Plus $12 per annum for care of main battery. J. Fortin's division includes the branch line to L'Anse St. Jean.
		98		1,060 00			
	Branch Line.						
	St. Alexis	0	Mrs. D. Simard				
7	St. Felix d'Otis	10	Rev. H. Neron	50 00	Nov.	1, 1903	
8	L'Anse St. Jean	30	{ J. Martel, repairer { R. Martel	{ 210 00 50 00	May Jan.	1, 1904 1, 1904	
9	Petite Saguenay	8	M. Tremblay	50 00	Sept.	1, 1903	
10	Anse Cheval	6	Price Bros	50 00	Nov.	1, 1903	
11	St. Etienne	7					
	St. Catharines Bay	17	G. Boulenne (see North Shore W. B. Line				
		78		110 00			
	Totals	176		1,170 00			

Murray Bay—St. Agnes Section.

	Murray Bay	0	Mrs. F. Vincent				(See Murray Bay, Bersimis section.)
1	St. Agnes	7½	Jos. Gaudreau	$50 00	Jan.	1, 1904	
2	Trinity (Guay)	7	Jos. Guay	50 00	Dec.	1, 1903	
		14½		100 00			
	Bay St. Paul	0	F. Boivin				{ (See Bay St. Paul, Chicoutimi section).
1	Petite River	13	J. Bouchard	50 00	Dec.	1, 1903	{ Payment at Bay St. Paul $25 per year and $12 for battery care, for operation of this branch to Petit River.
		13		50 00			

Connections for these lines with the G. N. W. Telegraph System are made at Chicoutimi, Bay St. Paul and Murray Bay.

GOVERNMENT TELEGRAPH SERVICE.—*Continued.*

CHICOUTIMI AND NORTH OF ST. LAWRENCE TELEGRAPH SYSTEM *Continued.*

CHICOUTIMI SECTION—*Concluded.*

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	St. Charles	0	B. Boucher	50 00	Sept. 1, 1903	
2	St. Ambroise	10	O. Grondin	50 00	" 1, 1903	
3	St. Leonard	7	Geo. Gagnon	50 00	" 1, 1903	
1	Shipshaw, North	6	J. Murdock	50 00	" 1, 1903	
5	Shipshaw	3	Aug. Dufore			
6	St. Anne	8	P. Gauthier	200 00	Aug. 1, 1903	
	Chicoutimi	3	G.N.W. Telegraph Co.			
		37		400 00		
	Branch Line.					
	St. Anne	0	P. Gauthier			(See St. Charles, Chicoutimi section.)
1	St. Fulgence	9	Rev. Geo. Gagnon	50 00	Jan. 1, 1904	
		9		50 00		
	St. Anne	0	P. Gauthier			
1	Range 9	3	Thos. Simard	50 00	Feb. 1, 1901	
2	Lac Charles	3	J. Bouliane	50 00	Jan. 1, 1904	
3	Lac Clair	9	Albert Dufore	50 00	" 1, 1904	
		15		150 00		

NORTH SHORE (West of Bersimis).

1	Murray Bay	0	Mrs. F. Vincent	50 00	or commission.	Previous to April 1, 1885	Plus $25 per year, and $12 for battery care for operation of branch to Quay.
2	Cap à l'Aigle	4	N. Duchesne	50 00	"	June 1, 1888	
3	St. Fidèle	6	A. N. Parent	50 00	"	April 1, 1890	
4	Port au Persil	7	A. Brassard	50 00	"	May 1, 1889	
			A. Brassard (repairer)	210 00	"	June 1, 1897	

5	St. Simeon	1	D. Gaudin	50 00	"	Dec.	1, 1887	
6	Baie des Rochers	12	G. Savard	50 00	"	June	1887	
7	St. Catharines Bay (Br. L.	17	G. Boulerne	100 00	"	Nov.	1886	
8	St. Etienne)		E. Boulerne (rep'r)	210 00	"	Sept.	1, 1899	
9	Tadousac (1¼ knot cable)	13	J. E. Caron	50 00	"	Nov.	1, 1888	
10	Sacré Cœur	12½	L. Maltais	50 00	"	Dec.	6, 1901	
	Br. from Tadousac							
11	Bergeronnes	15	M. Savard	50 00	"	April	1885	
12	Escoumains	12	J. H. Topping	50 00	"	"	1885	
13	Baie des Bacons	8	P. Bouchard			May	6, 1892	Commission at 25 per cent, without guarantee at Baie des Bacons.
14	Mille Vaches	8	J. A. Puise	50 00 or commission		April	1885	
15	Hamilton Cove	11½	C. P. Easton			Sept.	1, 1903	Accommodation office.
16	Portneuf light	6	S. Bouchard	50 00 or commission		July	1, 1890	
			E. Courbron (rep'r)	420 00		April	1, 1888	
17	Sault au Cochon	7		50 00 or commission				Sault au Cochon closed September 30, 1896.
18	Bersimis	31	Mrs. A. Laurier, agt & op	500 00		Jan.	1, 1902	
			,asst. opr.	180 00				
			E. Pope, dist. supt	600 00		April	1885	
	* Totals	174		2,870 00				

* Note.—In the estimates the maintenance of the Chicoutimi and North Shore line is provided under head of North Shore Line. They are operated conjointly.

North Shore (East of Bersimis).

1	P'te aux Outardes (cable)	12	H. Tremblay	50 00 or commission		Dec.	1, 1896	
	P'te Paradis (Manicouagan) cable landing	18						The repeating office formerly at Manicouagan was removed to Bersimis in September, 1896.
2	Seongalls Mills 14 mile loop line from Pte Paradis	28	Accomodation	25 p.c. commission		Aug.	1901	
3	River Godbout (cable)	26	N. A. Comeau	50 00 or commission		Oct.	15, 1885	
4	Pointe des Monts	18½	L. E. Faffard	50 00	"	Dec.	28, 1883	
5	Trinity Bay West	5¼	Z. Poulin	50 00	"	May	16, 1884	
6	Trinity Bay East	2½	A. Bilodeau	25 p.c. commission		"	1, 1889	
7	Caribou Islands	7	I. Comeau			Sept.	1, 1889	
8	Pointe aux Anglais	10½	Paul Côté	Accomodation office		Jan.	10, 1895	No commission is paid at this office.
9	Pentecost	6¾	E. H. Tétu, D. Supt	1,080 00 per annum		Nov.	1, 1891	
			Mrs. E. H. Tétu, as. opr	300 00	"	"	1, 1903	
10	Ste. Marguerite	47½	A. Therriault	180 00	"	July	1, 1888	
11	Clark City	5	Accomodation office	25 p.c. commission		April	17, 1903	
12	Seven Islands	17¾	P. E. Vignault, opr.	180 00 per annum		Jan.	2, 1884	
			L. N. Caron	540 00	"	May	29, 1902	Plus 50 cents per day when absent on duty.
13	River Moisie	15½	J. Poirier	50 00 or commission		June	1, 1896	
14	Pigou	28	Mrs. Peter Wright, op	100 00	"	Oct	1, 1902	
			Peter Wright, repr.	112 00	"	"	1, 1902	
15	Little River	29	Miss H. Leberge	50 00	"	"	10, 1900	
16	Sheldrake	15	A. LeBerge	50 00	"	"	1, 1897	
17	Thunder River	6½	Mrs. H. Cady	50 00	"	Feb	1, 1890	
18	Magpie	14	Geo. Molloy	50 00	"	Oct.	1, 1889	
19	St. John's River	9	B. Chambers	50 00	"	"	1, 1889	

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CHICOUTIMI AND NORTH OF ST. LAWRENCE TELEGRAPH SYSTEM—*Continued.* NORTH SHORE (East of Bersimis).

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
20	Long Point	10	A. Maloney	500 00 per ...	Sept. 21, 1896	Long Point is the repeating office for the Anticosti, cable in operation since September 1, 1891. The salary was increased from $360 since Nov. 1.
			Mrs. A. Maloney, as.op.	180 00 " ...	Nov. 1, 1900	
21	Mingan	7	M. J. Maloney	50 00 or commission	Oct. 1, 1889	
22	Point Esquimaux	24	Mrs. D. C. Hould	240 00 per annum	Sept. 1, 1897	Allowance for office rent $4 per month.
			Edwd. Cyr, inspr.	500 00 " ...	Nov. 2, 1902	Plus 50 cents per day when absent on duty.
23	Betchouanes	20	Alfd. Bodreau, repr.	112 00 " ...	Sept. 1, 1902	
			Mrs. A. Bodreau, opr.	100 00 " ...	" 1, 1902	
24	Piastre Bay	23	S. Tanguay, repr.	112 00 " ...	" 18, 1902	
			Mrs. J. Beetz, opr.	100 00 " ...	" 18, 1902	
25	Watichou	15	Mrs. Cl. Bourque, opr.	100 00 " ...	Dec. 1, 1903	This office was closed on withdrawal of former agent from Sept. 4, 1903, $12 rent to J. Beetz.
			John Bourque, repr.	100 00 " ...	" 1, 1903	
26	Aguanus	21¾	S. Galant, repr.	112 00 " ...	Sept. 3, 1902	
			Mrs. Galant, opr.	100 00 " ...	" 3, 1902	
27	Natashquan	21	C. Vignault, repr.	112 00 " ...	" 5, 1902	
			Miss Vignault, opr.	100 00 " ...	" 5, 1902	
28	Kegaska	33	Geo. Anderson, repr.	112 00 " ...	" 16, 1902	
			Miss Anderson, opr.	100 00 " ...	" 16, 1902	
			J. W. Osborne, inspr.	500 00 " ...	" 1, 1902	Plus 50 cents per day when absent on duty.
29	Masquaro	18	Wm. Foreman, opr & rep	212 00 " ...	June 1, 1903	
30	Romaine	25	M. Blais, repr.	112 00 " ...	Sept. 17, 1902	
			Miss R. Blais, opr.	100 00 " ...	" 17, 1902	
31	Wolf Bay	24	R. Jones, repr	112 00 " ...	Nov. 26, 1902	
			Miss R. Jones, opr.	100 00 " ...	" 26, 1902	
32	Pt. au Maurier	24	J. Galibois, repr.	112 00 " ...	Sept. 19, 1902	
			Miss P. Galibois, opr.	100 00 " ...	" 19, 1902	
33	Harrington	20	J. Jones, repr.	112 00 " ...	" 20, 1902	
			Mrs. Jones, opr.	100 00 " ...	" 20, 1902	
34	Whale Head	17	Nap. Nadeau, rep. & opr	212 00 " ...	Jan. 21, 1903	
35	Mutton Bay	20	Alf. Cormier, rep. & opr	444 00 " ...	June 1, 1902	
36	Bay de Ha	27	.....	.....	.....	Not yet opened.
37	St. Augustine	27	G. W. Bargess, rep. & opr	212 00 per annum	Sept. 25, 1902	
38	Coxipi	24	Jos. Picard, repr & opr.	212 00 " ...	Dec. 16, 1902	
39	Rockey Bay	30	Miss B. E. Chevalier, o	100 00 " ...	April 20, 1904	This office was closed from Sept. 7, 1903, the former agent having left the place.
			L. O. Chevalier, repr	112 00 " ...	" 20, 1904	
40	St. Paul River	21	G. Chevalier, repr.	112 00 " ...	Oct. 2, 1902	
			Miss Chevalier, opr.	100 00 " ...	" 2, 1902	
41	Brador Bay	29	Johnny Jones, opr.	100 00 " ...	June 13, 1903	
			P. C. Vignault, inspr	500 00 " ...	Feb. 1, 1903	Plus 50 cents per day when absent on duty.

42	Blanc Sablon	6	Thos. Morel, repr & opr.	212 00	"	Oct.	1, 1902	
43	Forteau Bay	13	A. Hart, repr & opr.	212 00	"	July	19, 1902	
44	Pointe Amour	17	Thos. Whyat, repr & opr	112 00	"	Feb.	17, 1903	
45	Western Modiste	16	Jas. Bolger, repr & opr.	212 00	"	Oct	5, 1902	
46	Red Bay	18	Geo. Moore, repr	112 00	"	"	9, 1902	
			Miss Moore, opr	100 00	"	"	9, 1902	
47	Chateau Bay	30	J. Maloney, opr & insp	500 00	"	Sept.	1, 1902	
			Miss Buckel, asst opr.	180 00	"	Dec.	1, 1902	
			J. McCarthy, local rpr	100 00	"	Nov.	1, 1903	
48	Belle Isle	23¾	J. C. Colton, opr.	360 00	"	Sept.	14, 1901	
	Totals	916		11,486 00				

ONTARIO—PELEE ISLAND TELEGRAPH SERVICE.

1	Leamington		J. McR. Selkirk, D. Supt	50 00		Nov.	1, 1888	
2	" Dock	2	F. Deslauriers	Accommodation office		"	1, 1895	
3	Club House	5	C. Harrison	Commission 25 p. c.		April	1, 1889	The commission is on the tolls for the Government line.
4	Point Pelee	5	W. A. Grub	"	"	Nov.	1, 1888	
	Leamington Dock to North Point Cable	17						The cable formerly 9½ knots from Point Pelee to the Island is now laid as here indicated 17 knots. The change was effected in August, 1901.
5	North Point Lighthouse	1	J. R. Ledwell	Commission 25 p. c.		June	1, 1899	
6	North Dock	2	C. B. Quick	"	"	Nov.	1, 1888	
7	McIntyre's Corner	2½	Mrs. A. McIntyre	"	"	"	1, 1896	
8	West Dock	2½	A. M. McCormick	"	"	"	9, 1888	
9	South Dock	5½	T. W. Ferguson	"	"	July	1, 1900	
	Totals	42½		50 00				

NOTE.—This line is operated with telephones.

GOVERNMENT TELEGRAPH SERVICE *Continued.*

LINES IN THE NORT-WEST TERRITORIES.

No.	Stations.	Intermediate Distance.	Agents.	Salaries per Annum.	Date of Appointment.	Memo.
	Qu'Appelle-Edmonton Sec.	Miles.		$ cts.		
1	Qu'Appelle	0	J. S. Macdonald, D. Supt. C. P. R. Tel. Co J. W. Wilson, lineman	1,800 00 420 00 500 00	Jan. 1, 1898 Dec. 1, 1896 March 1, 1902	Salary increased from $1,200 since November 1, 1903. The agent-operator at Qu'Appelle is joint with the C. P. R. Salary increased from $360, since November 1, 1903.
2	Fort Qu'Appelle	17	Miss E. Johnston	600 00	" 1, 1885	
3	Touchwood	46	A. VonLindeburg	720 00	Nov. 1, 1883	
4	Humbolt	78	H. J. MacDonald		Sept. 1, 1904	Salary increased from $600, since Nov. 1, 1903.
5	Saskatoon (14 miles loop)	69	C. P. R. Tel. Co T. G. Clement	300 00 600 00	Jan. 1, 1892 Oct. 1, 1903	The agt.-operator at Saskatoon is joint with the C. P. R.
6	Henrietta	52			" 1, 1886	
7	Battleford	47	W. Salisbury D. Noel	720 00 720 00	April 15, 1890 Oct. 1, 1900	Transferred from Bresaylor, 1st Sept. 1904.
8	Bresaylor	27	T. J. Callahan	720 00	Dec. 1, 1900	" Batleford "
	Pitt	62				Closed since October 1898. Office temporarily opened May 1,
9	Lloydminster loop (2 wires)	22	E. McCleneghan	600 00	April 18, 1904	till Aug. 6, 1904 for Immigration Dept.
10	Onion Lake	13	H. McCleneghan	720 00	Oct. 1, 1900	Salary increased from $600, since Nov. 1, 1903.
11	Moose	32½	G. G. Mann	720 00	Aug. 1, 1902	" " "
12	St. Paul de Metis	32	M. Therien	600 00	Dec. 1, 1899	" " " $360 "
13	Saddle Lake	13	J. W. Carroll	720 00	Sept. 1, 1900	A telephone line extends from the office at Saddle Lake to the Indus'l School 6½ miles. Sl'ry inc'sd from $600 since Nov. 1, 1903.
14	Andrew Loop (2 wires)	4½	A. K. Morrison	600 00	June 7, 1904	
15	Victoria	37	J. C. Gordon	720 00	April 1, 1899	Salary increased from $600, since Nov. 1, 1903.
16	Star	6	E. A. Holmes	600 00	Aug. 2, 1904	
17	Ft. Saskatchewan	43	A. W. M. Campbell	600 00	Oct. 1, 1898	
18	Edmonton	24	T. J. McNamara W. McKay, lineman	720 00 720 00	" 1, 1901 May 1, 1886	Salary increased from $360, from Aug. 1, 1904. The office at Edmonton has been operated jointly with the C. P. R. Tel. Co. since Jan. 1, 1892.
19	Arthabaska Landing	98	Jas. McKernan	600 00	Oct. 1, 1904	
	Totals	723		15,020 00		

	Branch Line.						
	Edmonton	0	In operation prior to 1895				This branch line operated by the Edmonton District Telephone Co.
20	St. Albert	9					
21	River Qui Barre	21	This section built in 1903				
22	Alexandria	6					
		36					
	Edmonton	0					This branch is operated as a telephone line. Construction completed October 1904.
	Indian Agency	14					
	Spruce Grove	5					
		19					
	Wood Mountain Section.						
1	Moosejaw	0	C. P. Tel., agent	240 00	Dec. 1, 1891		Moosejaw office is operated jointly with the Canadian Pacific Telegraph Co.
			H. Sikes, repairer	600 00	" 1, 1893		
2	Wood Mountain	90½	J. H. Thompson, agent	600 00	" 1, 1890		
3	Willow Branch	38	H. A. Noel, agent	600 00	Oct. 19, 1904		
	Duck Lake Section.	128½		2,040 00			
1	Batoche	0	D. H. Grant	120 00	" 1, 1902		
2	Duck Dake	9	A. H. Gordon	120 00	Feb. 1, 1903		
3	Indian Agency	3½					Telephone connection.
		12½		240 00			

BRITISH COLUMBIA.

No.	Offices.	Intermediate Distance.	Agents, &c.	Positions	Salaries per Annum.	Date of Appointment.	Memo.
	Kamloops—Lower Nicola.	Miles.			$ cts.		
	Telephone Line.		(See note in margin)				NOTE.—This line is operated under the superintendence of the resident engineer at Victoria, and for conversations 25c. for 5 minutes, half that rate for each additional 5 minutes or fraction thereof.
1	Kamloops	0	C. S. Stevens	Agt. opr.	300 00	June 1, 1901	
			Prov. Govt. Office	Lessee		July 1901	NOTE.—The lessees pay a monthly rent for the connections, and are allowed 25 per cent commission on local tolls for messages and conversations of non subscribers.
2	Anderson Creek	12	W. McLeod	"		" 1901	
3	Nicola Valley		W. R. McDonald	"		" 1901	
4	Stumps Lake	13	Thos. Bullman	"		" 1901	
5	Beaver Ranch		J. W. Moor	"		" 1901	
6	Quelchena	20	E. O'Rourk	"		May 1900	Three additional connections in July 1901.
7	Nicola Lake	9	A. E. House	"		" 1900	Add at Nicola Lake, July 1, or Government Office.
8	Coutlee		Blair & Co.	"		July 1901	Dr. Sutton, A. R. Carrington.
9	Lower Nicola	13	G. Armstrong	"		May 1900	
	Total	67					

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

BRITISH COLUMBIA—*Continued.*

No.	Offices.	Intermediate Distance.	Agents, &c.	Positions.	Salaries per Annum.	Date of Appointment.	Memo.
	Nanaimo-Comox.	Miles.			$ cts.		
1	Nanaimo	0	W. F. Archibald. A. M. Oliver, joint with C.P.R.	Agent and operator. Assistant operator	306 00 120 00	Mar. 1, 1896 June 1, 1902	The amount comprises $20 per month for agency and operation, $3 for messenger service and $2.50 for battery care.
2	Wellington	5	E. & N. Ry. Co.	Agent and operator.	Commiss.	April 1, 1893	
3	Parksville	23	Mrs. R Williams. W. Mills.	" " . Lineman	360 00 360 00	Dec. 1, 1897 June 1, 1903	Parksville, Quellicum section.
4	Union Bay	32¼	Miss E. McDonald Thos. Hudson.	Agent and operator. Lineman	360 00 780 00	" 3, 1898 Nov. 17, 1898	
5	Union Mines		J. Dunsmuir.	Accommodat'n office.			See mention of this in body of report (1897-98).
6	Cumberland	10	Albert Peacy	Agent and operator.	120 00 com. 25 p.c.	Apr. 28, 1898	
7	Courtney	7					Courtney and Comox communicated by telephone at prearranged intervals.
8	Comox	3¾	M. McDonald	Agent and operator.	360 00	Nov. 1, 1895	
	Total	81			2,766 00		
							NOTE.—The repairs of this line has been done jointly with the Can. Pac. Telegraph since December 1, 1902.
	Parksville, Alberni and Cape Beale Line.						
	Parksville	0	(See above)				
1	Alberni	29½	Mrs. P. A. Haslam	Agent and operator.	240 00	Oct. 1, 1899	Proportion of salary for Comox line included.
2	Cape Beale	57	M. Patterson	" " .	240 00	May 1, 1900	Proportion of salary for this line.
		86½			480 00		
	Alberni-Clayoquot Line.						
1	Alberni	0	P. A. Haslam.	Agent and operator.	120 00	Dec. 1, 1902	Proportion for this line.
2	New Alberni	2	E. B. Gerrard E. A. Waterhand	Agent linemen Agent and operator.	660 00 Com. 25 p.c	" 1, 1902 Oct. 1, 1903	Section extends from Franklin Creek to Pipestem Inlet, post office address, New Alberni.
	Franklin Creek ½ mile cable.	8					Line crosses canal at this point by submarine cable.
3	Ucluelet	20½	W. L. Thompson H. J. Hillier	Agent linemen Lineman	720 00 660 00	Dec. 1, 1902 " 1, 1902	

4	Clayoquot	66¼	E. S. Reeve	Agent lineman	720 00	"	1, 1902	
	Stubbs Island			Accommodat'n office				Private cable connection for local firm.
	Totals	96¾			2,880 00			
	Golden Windermere Line.							
1	Wilmer	0	R. A. Power	Agent and lineman	720 00	Jan.	1, 1902	
2	Athalmer	5	Telephone Connt'n					Operated from Windermere, Wilmer and Spillimacheen.
3	Windermere	5	" "					" Spillimacheen " "
4	Spillimacheen	16	V. F. Dunn	Agent and lineman	900 00	Jan.	1, 1902	Local superintendency.
			Telep. Connet'n.					Operated from Windermere, Wilmer and Athalmer.
5	Golden	66	R. N. Young	Agent and operator	300 00	Mar.	1, 1902	Joint agent with C. P. Tel.
	Totals	92			1,920 00			

GOVERNMENT TELEGRAPH SERVICE—*Concluded.*

BRITISH COLUMBIA—*Concluded.*

No.	Stations.	Inter-mediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
	Victoria—Cape Beale.	Miles.		$ cts.		
			(See note in margin)			NOTE.—The superintendence of this line has been in the hands of the resident engineer at Victoria since October, 1901, when the arrangement theretofore in operation with the C. P. Ry. Co. was terminated.
1	Victoria	0	E. Houghton, oper. (C.P.Tel.)	200 00	Nov. 1, 1891	Proportion of salary.
	Sooke	18				
2	Otter Point	8	E. Gordon, agt. and operator	720 00	Dec. 1, 1891	
3	Jordan River (Shirley)	10	Percy Clark	540 00	" 1, 1903	
4	Port San Juan (Port Renfrew)	30	E. C. Williams	240 00	Sept. 22, 1903	
			W. G. H. Ellison, repairer	520 00	" 22, 1903	
5	Carmanah Lighthouse (Clo-oose 2 miles west)	24	W. P. Daykin, repairer	240 00	Nov. 1, 1891	
			D. Logan, repairer	540 00	April 1, 1898	
			Otto Rosander, repairer	540 00	Mar. 6, 1901	
6	Cape Beale	28	M. Patterson, agt. & operator	120 00	Sept. 1, 1899	
	Totals	118		3,660 00		
	Vancouver—Salt Springs Line.					
1	Duncan Station	9	E. & N. Ry. Co.	Accommodation.	Mar. 1, 1902	
2	Maple Bay	3	Wm. Beanmont	"	" 1, 1902	
3	Sanson Narrows to Salt Springs (cable)	$0\frac{3}{4}$				
4	Edwards' Store	3	Edwards & Co	Accommodation.	" 1, 1902	
5	Ganges Harbour	9		"	" 1, 1904	
	Totals	$24\frac{3}{4}$				

There have been no staff appointments on this line, it being worked by telephone for the present merely for general convenience, and looked after by the persons directly interested.

GOVERNMENT TELEGRAPH SERVICE.

YUKON LINES.

NAMES of employees and monthly salaries, &c., Yukon Telegraph Service, which includes Port Simpson, Barkerville, Quesnelle and Lillooet branches.

(Compiled from pay sheets of June and July 1904.)

Number.	Office.	Intermediate Distance.	Positions.	Salaries per Month.	Tariff.	Night Rate.
				$ cts.	$ cts.	
			C. E. Gooding, manager	60 00		
			H. B. Rochester, operator	42 00		
			G. L. Hall, operator	45 00		
			T. R. Clark "	45 00		
1	Ashcroft		G. H. Dean "	45 00		
			S. Pritchard, lineman	75 00		
			P. R. Quain, Dist. Supt. Clerk	83 33		
			J. T. Phelan "	175 00		
2	Pavilion	40	F. C. Schanz, operator	60 00	25 and 2	25 and 1
3	Lillooet	22	S. A. MacFarlane, opr. & linem	60 00	25 " 2	25 " 1
4	Cash Creek	4	Accommodation office, lineman	50 p. c. com.	25 " 2	25 " 1
5	Clinton	26	A. LeBourdais " "	60 00	25 " 2	25 " 1
6	115 Mile House	55	S. Hannah " "	60 00	25 " 2	25 " 1
7	150 "	35	T. S. Hall " "	60 00	50 " 3	30 " 2
8	Harpers Camp	33	S. H. Patenaude " "	40 00	50 " 3	30 " 2
9	Bullion	27			50 " 3	
10	Quesnel Forks	4	O. Landry office, lineman	66 66	50 " 3	30 " 2
11	Soda Creek	42	C. H. Smith " "	60 00	50 " 3	30 " 2
12	Alexandria	28	G. A. Broughton office, lineman	60 00	50 " 3	30 " 2
13	Quesnel	26	T. F. Murphy, operator	60 00	50 " 3	30 " 2
			O. Earley, lineman	60 00	50 " 3	
			J. Mooney "	83 per day	50 " 3	
14	Lafontaine‡	46	Cariboo Consolidated Co	50 p. c. com.	50 " 3	
15	Barkerville‡	15	J. Stone, operator and lineman	60 00	50 " 3	
16	Blackwater	53	J. McNeill " "	70 00	75 " 5	
17	Bobtail Lake	45	J. W. Howison, operator	75 00	75 " 5	
			J. A. Holder, lineman	70 00	75 " 5	
18	Stoney Creek	35	W. F. Manson, operator	75 00	75 " 5	
			J. D. Charleson, lineman	70 00	75 " 5	
19	Fraser Lake	35	G. N. Proctor, operator	75 00	75 " 5	
			M. McNevin, lineman	70 00	75 " 5	
20	Burns Lake	69	W. Heinz, operator	75 00	75 " 5	
			B. Lashbrook, lineman	70 00	75 " 5	
21	South Backley	30	N. McInnis, operator	75 00	75 " 5	
			E. Barrett, lineman	70 00		
22	North Backley	25			100 " 7	
23	Buckley Roach	27	L. Broughton, operator	75 00	100 " 7	
			H. Fink, lineman	70 00		
24	Morricetown	35	T. F. Cowan, operator	75 00	125 " 10	
			W. J. Toneri, lineman	70 00		
25	Hazleton	40	G. M. Swan, operator	100 00	125 " 10	
			E. R. Cox, lineman	100 00		
			J. C. K. Seeley, lineman	75 00		
			E. E. Charleson, for'man storekr	150 00		
26	Meanskinisht§	35	E. Tomlinson, operator	50 00	125 " 10	
			R. Tomlinson, lineman	75 00	125 " 10	
27	Skeena Canyon §	47	A. Daoust, operator	75 00		
			C. Durham, lineman	70 00		
			F. Dresser "	70 00		
28	Lorn Creek §	24	A. J. West, operator	75 00	125 " 10	
			J. D. McIntosh, lineman	75 00		
29	Telegraph Point §	53	W. J. O'Neill, operator	75 00	150 " 10	
			C. Peterson, lineman	70 00		
30	Aberdeen §	4½	G. Coutu, operator	75 00	150 " 10	
			B. F. St. Amour, lineman	70 00		

*Br. from Ashcroft. †Br. from 150 Mile House. ‡Br. from Quesnelle. §Br. from Hazleton.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

NAMES of employees and monthly salaries, &c., Yukon Telegraph Service, &c.—*Con.*

YUKON LINES—*Continued.*

Number.	Office.	Intermediate Distance.	Positions.	Salaries per Month.	Tariff.	Night Rate.
				$ cts.	$ cts.	
31	Port Simpson	39	M. W. O'Neill, operator	50 00	150 " 10	
32	1st Cabin	27	H. A. Cullon "	75 00	125 " 10	
			Hugh Taylor, lineman	70 00		
33	Kuldo	28	G. T. Carpenter "	70 00		
			G. W. Smith "	70 00		
34	3rd Cabin	25	Chas. Martin, operator	75 00		
35	4th Cabin	20	P. Burnell "	75 00		
			J. McMenamin, lineman	70 00		
36	5th Cabin	20	E. A. Hawley, operator	100 00		
			C. E. Loucks, lineman	$3 per day		
37	6th Cabin	20	G. T. Brown, operator	100 00		
			W. Ross, lineman	$3 per day		
38	7th Cabin	19	J. A. Armstrong, operator	100 00		
			L. Dubois, lineman	$3 per day		
39	8th Cabin	19	J. Muir, operator	100 00		
			G. Duhamel, lineman	$3 per day		
40	9th Cabin	17	T. E. Harkin, operator	100 00		
			G. Hill, lineman	$3 per day		
41	Echo Lake	32	J. Patterson, operator	100 00	150 and 10	
			F. N. Jackson, lineman	$3 per day		
42	25-Mile Cabin	25	Jas. Murie, operator	100 00		
			J. W. Hovey, lineman	$3 per day		
43	Iskoot	16	J. W. Watts, operator	100 00	150 " 10	
			J. Lonery, lineman	$3 per day		
44	Telegraph Creek	61	A. S. Gillespie, operator	100 00	175 " 10	
			W. S. Simpson, lineman	75 00		
			A. J. Charleson, storekeeper	150 00		
45	Shesley	45	A. Johnson, operator	82 50	175 " 10	
			J. Craig, lineman	75 00		
46	Nahlin	61	S. G. Lawrence	82 50	185 " 10	
			R. Mckay, lineman	75 00		
47	Nakma	49	R. P. Hall, operator	82 50	185 " 10	
			J. Huston, lineman	75 00		
48	Pike River	40	Geo. Coutts, operator	82 50	200 " 15	
			J. A. Thorne, lineman	$3 per day		
49	Graveyard Point		S. W. Dobie, operator	75 00		
			J. D. Wells, lineman	70 00		
			A. E. Johnston, lineman	70 00		
50	Atlin	23	F. W. Dowling, day operator	116 66	200 " 15	
			A. B. Taylor, night operator	100 00		
			H. D. Gagné, foreman	125 00		
51	Center Cabin	35	J. Stronach	82 50		
52	Tagish	40	M. R. Grimes, operator	82 50	225 " 15	
53	Cariboo Crossing	18	Adam Dickson, lineman	75 00	225 " 15	
54	Whitehorse	65	A. B. Clegg, dist. supt	175 00	250 " 15	
			H. Gilchen, store-keeper	150 00		
			J. P. Champagne, clerk	112 50		
			G. S. Flemming, operator	115 00		
			G. W. Marshall, lineman	75 00		
			Mrs. Jefferies, house kpr & cook	75 00		
			Bruce Watson, messenger	35 00		
55	Lower Leberge	59	D. Potts, operator	82 50	250 " 15	
			J. H. Brown, lineman	75 00		
56	Hootalinqua	30	J. W. Graham, operator	82 50	250 " 15	
57	Big Salmon	34	H. O. Lakkin, lineman	75 00	250 " 15	
58	Five Fingers	96	W. S. Langtree, operator	82 50	275 " 15	
59	Yukon Crossing	8	J. Hope	82 50		
60	Fort Silkirk	50	E. K. Waller, operator	82 50	275 " 15	
61	Selwyn	30	J. W. Wilson, operator	82 50	275 " 15	
62	Stewart River	75	Chas. N. Graham, operator	82 50	300 " 20	

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

NAMES of employees and monthly salaries, &c., Yukon Telegraph Service, &c.—*Con.*

YUKON LINES—*Continued.*

Number.	Office.	Intermediate Distance.	Positions.	Salaries per Month.	Tariff.	Night Rate.
				$ cts.	$ cts.	$ cts.
63	Ogilvie	23	J. P. Beausoleil, operator	82 50	300 " 20	
			S. V. Clem, lineman	75 00		
64	Dawson	48	W. Brownlow, manager	150 00	300 " 20	
			C. A. Couture, foreman	125 00		
			G. A. McLachlan, day opr	125 00		
			F. A. Hanley, night oper	125 00		
			R. C. MacDonald, clerk	100 00		
			H. Douglas, messenger	$3 per day		
			Wm. Gross, lineman	80 00		
			Mrs. D. Hunt, house kpr & cook	100 00		
65	Forty Mile	55	W. Boyd, operator	82 50	325 " 20	
66	Boundary	40			325 " 20	
..	Supt. office		J. Y. Rochester, act. supt	200 00		
..	Vancouver, B.C.		J. J. Healy, clerk	140 00		
			Emma Hays, stenographer	65 00		
		2,252½		9,513 65		
			Add 10 persons $3 per day as above	900 00		
			Total monthly salaries say	$10,400 00		

YUKON TARIFFS.

The rates given above for points north of Quesnel are one-third less than those primarily adopted, which were calculated on the general basis of 50 cents for 100 miles and 25 cents for each additional 100 miles, counting the distance from Ashcroft.

The local rates between offices north of Quesnel are calculated on the basis of 50 cents for 100 miles and 25 cents for each additional 100 miles, and the local rates between offices north of Atlin are fixed at 50 cents for each 100 miles.

Cable Messages.—On transatlantic business the word rate is twice as much as the additional word rate given in the list for all points north of Ashcroft:—Barkerville, $3 \times 2 = 6$c.; Dawson $20 \times 2 = 40$c. per word.

On transpacific business the word rate is the additional word rate plus 4c.; Barkerville, $3 + 4 = 7$c.; Dawson, $20 + 4 = 24$c. per word to or from Ashcroft.

Press despatches.—For the *Yukon* line the rate is 1 cent per word, minimum charge $1; this applies to the whole line.

Yukon system connects at Boundary with U. S. Sig. Service Telegraph System.

* Where the tariff rate is entered as 25-1 or 50-2, &c., the meaning is that the rate is 25 cents or 50 cents for ten words and 1 cent or 2 cents for each additional word.

GOVERNMENT TELEGRAPH LINES.

SPECIAL TARIFF.

Cable messages.—Rates for cable messages passing over the Yukon line will be found in connection with the Yukon tariff in the following pages.

Elsewhere, the rate for transatlantic messages passing over the government lines is the same as for ordinary through messages, excepting where the ordinary tariff is more than 25 cents; in such cases the government line rate is 4 cents per word, with a minimum charge of 25 cents. For example :—

For a message of six words or less the charge is 25 cents for government line.

For a message of seven words the charge is (7 x 4) 28 cents for government line.

For a message of twelve words the charge is (12 x 4) 48 cents for government line.

In every case the counting of words includes the address and signature in the same way as for transatlantic cable tolls.

Press despatches.—The rate for press despatches on the government lines (excepting the Yukon line), is 20 cents per 100 words; no single message less than 20 cents.

For the *Yukon* line the rate is 1 cent per word, minimum charge $1; this applies to the whole line.

REGULAR TARIFF.

NOVA SCOTIA.

Line from North Sidney to Meat Cove and Mabou—Local rate 25-1 (20 offices.)*

Big Bras d'Or	Through rate 15-1 from North Sydney, W. U. office.		
New Campbellton's (Kelly's Cove)	"	"	"
Englishtown	"	"	"
Baddeck	"	"	"
Murray	"	"	"
Indian Brook	"	"	"
French River	"	"	"
South Ingonish	"	"	"
Ingonish	"	"	"
Neil's Harbour	"	"	"
Dingwall	"	"	"
Aspy Bay	"	"	"
Meat Cove	"	"	"
Pleasant Bay	"	"	"
Cheticamp	"	"	"
Grand Etang	"	"	"
North-East Margaree	"	"	"
Margaree Harbour	"	"	"
South-West Margaree	"	"	"
Inverness Town (Broad Cove)	"	"	"

Night messages are exchanged with the Western Union Telegraph Company for offices on this line. Rate 1 cent per word with minimum of 15 cents. The local night rate is 1 cent per word with minimum of 25 cents.

*When the tariff rate is entered as 25-1 or 50-2, &c., the meaning is that the rate is 25 cents or 50 cents for ten words and 1 cent or 2 cents for each additional word.

Line from Barrington to Cape Sable—Local rate 12-1.

Newellton.....Through rate 12-1 from Barrington, W. U. office
Cape Sable Lighthouse..... " " "

This line is now operated by the local telephone company. Terms of lease provide for former telegraph rate as above not being exceeded.

NEW BRUNSWICK.

Line from Chatham to Point Escuminac—Local rate 25-1 (4 offices.)

Bay du Vin.....Through rate 15-1 from Chatham, G. N. W. office.
Lower Hardwicke..... " " "
Escuminac..... " " "
Pt. Escuminac Lt. House..... " " "

Line from Eastport, Me., to Campobello, Grand Manan, and Whitehead Islands (9 offices)—Local rates between offices on Grand Manan, and Whitehead Islands, 15-1; Grand Manan and Campobello Island 25-2 ; The Islands and Eastport, Me., 25-2, W.U.O.

Welchpool, Campobello.....Through rate 25-2 from Eastport, Me., W. U. office.
Flagg's Cove, Grand Manan..... " " "
Castalia..... " " "
Woodward's Cove..... " " "
Grand Harbour..... " " "
Seal Cove..... " " "
Southern Head..... " " "
Cheney's Head..... " " "
Whitehead Islands..... " " "

QUEBEC.

Line from Gaspé to Anticosti Island, Q. (9 offices)—Local rates between offices on the Island 25-1 ; Gaspé and the Island offices 50-2.

South-West Point..... Through rate 50-2 from Gaspé, G. N. W. office.
Salt Lake..... " " "
Shallop Creek..... " " "
South Point..... " " "
Heath Point..... " " "
Fox Bay..... " " "
Becscie River..... " " "
West Point..... " " "
English Bay..... " " "

Line from Meat Cove, C.B., N.S., to Magdalen Islands, Q. (9 offices)—Local rates between offices on the Islands 25-1 ; Meat Cove and the Islands 50-2 ; offices on the Meat Cove line and the Islands 50-2.

Amherst Island.....Through rate 50-2 from North Sydney, W. U. office.
Amherst Lt. House..... " " "
Etang du Nord Village..... " " "
Etang du Nord Lt. House..... " " "
Cap aux Meules (Grindstone)..... " " "
House Harbour..... " " "
Grosse Isle..... " " "
Grand Entry..... " " "
Bryon Island..... " " "

Line from Meat Cove, C.B., N.S., to St. Paul's Island—Local rate between offices on Meat Cove line and St. Paul's 50-2 (1 office).

St. Paul's Island Lt. House 50-2 from North Sydney, N.S., W.U. office.

Line from Quebec to Grosse Isle Quarantine Station (7 offices)—Local rates between offices on Orleans Island and Isle Réaux, 15-1; on Orleans Island, Isle Réaux and Quebec 15-1; on Orleans Island and Grosse Isle 25-1; on Isle Réaux and Grosse Isle 15-1.

St. Pierre, Orléans Island	Through rate 15-1 from	Quebec,	G. N. W. office.
Ste. Pétronille	"	"	"
St. Laurent	"	"	"
St. Jean	"	"	"
St. François	"	"	"
Isle Réaux	"	"	"
Grosse Isle	" 25-1	"	"

Line from Baie St Paul to Chicoutimi (7 offices).

For business with offices west of Baie St. Paul and terminating at Quebec, add 15c. and 1c. to the government line tariff.

For business with offices west of Baie St. Paul, beyond Quebec, add the full rate of the Great North-Western Telegraph Company to the government line tariff.

Line from Murray Bay to Chateau Bay (48 offices) with branch to Anticosti and extension to Belle Isle.

For business with offices west of Murray Bay and terminating at Quebec, add 15c. and 1c. to the government line tariff.

For business with offices west of Murray Bay, beyond Quebec, add the full rate of the Great North-Western Telegraph Company to the government line tariff.

Local rates between offices not more than 100 miles apart 15-1; more than 100 miles apart 25-1; on mainland and Anticosti 50-2; and on mainland and Belle Isle 50-2.

St. Urbain	15-1 from Baie St. Paul (Ck. Que.)		G. N. W. office.
Lacruche	"	"	"
St. Alexis	"	"	"
L'Anse St. Jean	"	"	"
St. Alphonse de Bagotville	"	"	"
Chicoutimi	"	"	"
Cap à l'Aigle	15-1 from Murray Bay (Ck. Que.)		G. N. W. office.
Ste. Fidèle	"	"	"
Port au Persil	"	"	"
St. Siméon	"	"	"
Baie des Rochers	"	"	"
Rivière aux Canards	"	"	"
St. Etienne	"	"	"
Tadoussac	"	"	"
Bergeronnes	"	"	"
Escoumains	"	"	"
Baie des Bacons	"	"	"
Mille Vaches	25-1 "	"	"
Portneuf Mills	"	"	"
Portneuf Light	"	"	"
Sault au Cochon	"	"	"
Betsiamis (Bersimis)	"	"	"

Manicouagan (Pt. Outardes). 25-1 from Murray Bay (Ck. Que.) G. N. W. office.
Scougall's Mills.. .. .. " " "
River Godbout.. .. .. " " "
Pointe des Monts.. .. .. .. " " "
Trinity Bay, West.. .. .. " " "
Trinity Bay, East.. .. .. .. " " "
Caribou Islands.. .. .. .. " " "
English Point.. .. .. " " "
Pentecost.. .. .. " " "
Ste. Marguerite.. .. .. .. " " "
Clark City.. .. .. " " "
Seven Islands.. .. .. " " "
River Moisie.. .. .. " " "
Little River.. .. .. " " "
Sheldrake.. .. .. " " "
Thunder River.. .. .. " " "
Magpie.. .. .. " " "
St. John River.. .. .. " " "
Long Point.. .. .. " " "
Mingan.. .. .. " " "
Point Esquimaux.. .. .. .. " " "
Betchouanes.. .. .. " " "
Piastre Bay.. .. .. " " "
Watichou.. .. .. " " "
Aguanus.. .. .. " " "
Natashquan.. .. .. " " "
Kegaska.. .. .. " " "
Masquaro.. .. .. " " "
Big Romaine.. .. .. " " "
Wolfe Bay.. .. .. " " "
Pointe du Maurier.. .. .. " " "
Harrington.. .. .. " " "
Whale Head.. .. .. " " "
Baie des Moutons.. .. .. .. " " "
Bay de Ha.. .. .. " " "
St. Augustin.. .. .. " " "
Coxipi.. .. .. " " "
Rockey Bay.. .. .. " " "
St. Paul River.. .. .. .. " " "
Brador Bay.. .. .. " " "
Bonne Espérance (St. Paul's River).. .. .. " " "
Forteau Bay.. .. .. " " "
Pointe Amour.. .. .. " " "
Red Bay.. .. .. " " "
Chateau Bay.. .. .. " " "
Belle Isle.. .. ..50-2 " " "
Anticosti Id. via Long Point. " " "

ONTARIO.

Line from Leamington to Pelee Island (Telephone Circuit)—Local rates between Leamington and Point Pelee 15-1; *mainland and Island offices* 25-1; *offices on the Island* 15-1 *(8 offices).*

Gun Club House, mainland....15-1 (thro' business) from Leamington, G. N. W.
Pointe Pelee, mainland.. .. .. " " "

Leamington Dock	15-1 (thro' business)	from Leamington,	G. N. W.
North Pt. Lt. H'se, Pelee Island	"	"	"
North Dock, Pelee Island	"	"	"
McIntyre's Corners	"	"	"
West Dock, Pelee Island	"	"	"
South Dock	"	"	"

NORTH-WEST TERRITORIES.

Line from Qu'Appelle (C.P.R. Sta.) to Edmonton, Alberta—Local rates, 15-1, 25-2, 50-3, for distances 10 to 600 miles (13 offices.)

Fort Qu'Appelle	25-2	Qu'Appelle or Saskatoon.
Touchwood	"	"
Saskatoon	"	"
Saskatoon (Ts. office C.P.R. Tel.)	"	"
Henrietta	"	"
Battleford	"	"
Bressaylor	25-2	Saskatoon ; 50-3 Qu'Appelle or Edmonton.
Onion Lake	"	"
Moose	"	"
St. Paul de Métis	50-3	Saskatoon, Qu'Appelle or Edmonton.
Saddle Lake	"	"
Victoria	25-2	Edmonton ; 50-3 Qu'Appelle or Saskatoon.
Star	"	"
Fort Saskatchewan	"	"
Edmonton (Transfer office C. P. R. Tel.)	"	"

Line from Moosejaw (C. P. Stn.) to Wood Mountain—Local rates 25-2 (1 office).

Wood Mountain ..... 25-2 from Moosejaw.

BRITISH COLUMBIA.

Line from Victoria to Cape Beale—Local rate 50-3 (6 offices).

Sooke	50-3	from Victoria C. P. R. Tel. office.
Otter Point	"	"
Jordan River	"	"
Port San Juan	"	"
Carmanah Lt. House	"	"
Cape Beale	"	"

Line from Nanaimo to Comox—Local rate 25-2 (9 offices).

Wellington, (C.P.R. & E. & N. Ry.)	25-2	from Nanaimo.
Parksville	"	or Wellington.
Fanny Bay	"	"
Cumberland	"	"
Union Bay	"	"
Union Mines	"	"
Courtney	"	"
Comox	"	"
Alberni (branch)	"	"

Line from Alberni to Cape Beale—Local rate 50-3.

Between offices on the Victoria-Cape Beale line and the Nanaimo-Comox line, via Alberni, 50-3.

Line from Golden to Windermere—Local rate 25-2 (3 offices).

1. Athalmer. . . . . 25-2 from Golden (C. P. Ry.)
2. Wilmer. . . . . "
3. Windermere. . . . . "

Line from Kamloops to Lower Nicola (Telephone) (8 offices).

Connections are leased and lessees allowed commission on messages of non-subscribers. Tariff 25-2 local and from Kamloops, and for conversations 25 cents for five minutes, half that rate for each additional five minutes or fraction thereof.

Yukon System.

Tariff rates for the Yukon lines are given in the Table of Staff, &c., in the foregoing pages.

SUMMARY.

Offices on government lines, as listed	312
Offices at transfer points with connecting lines	15
Total number embraced by the service	327

The following report from Mr. J. Y. Rochester, acting superintendent of the Yukon system, at Vancouver, is elsewhere referred to in the foregoing pages.

VANCOUVER, B.C., November 1, 1904.

SIR,—I respectfully submit to you herewith my report of the working of the Yukon telegraph system for the past fiscal year, ended June 30, 1904.

The revenue and expenditure for the past fiscal year for the main line and branches is as follows :—

MAIN LINE, ASHCROFT TO NORTHERN BOUNDARY.

Expenditure.		Revenue.	Surplus.	Deficit.
$ cts.		$ cts.	$ cts.	$ cts.
159,679 25		123,757 31		35,921 94
13,531 42	Port Simpson Line	1,051 23		12,480 19
977 44	Barkerville	1,024 84	47 40	
1,677 58	Horsefly	663 11		1,014 47
924 46	Lillooet	495 48		428 98
176,790 15		126,991 97	47 40	49,845 58
	Less surplus			47 40
	Deficit			49,798 18
	Expenditure			$176,790 15
	Revenue			126,991 97
	Deficit			49,798 18

To which must be added expenditure made at Ottawa.

COMPARATIVE Statement of revenue and expenditure for 1902-03 and 1903-04.

Revenue.	
1902-1903	$113,621 44
1803-1904	126,991 97
Increased revenue	$13,370 53
Expenditure.	
1902-1903	$242,211 51
1903-1904	176,790 15
Decreased expenditure	$65,421 36
Volume of Business.	
1902-1903—Messages, 41,347	$107,585 36
" Press, 603,618	6,036 18
Total	$113,621 54
1903-1904—Messages, 47,982	$119,238 39
" —Press, 775,358	7,753 58
Total	$126,991 97

Increased Messages, 6,635.
" Press words, 171,740.
Increase to revenue, $13,370.55.

The following gives the increase and decrease for each month of the years :—

	Decrease.	Increase.	Total.
1903.	$ cts.	$ cts.	$ cts.
July		638 53	
August	196 26		
September	293 14		
October		543 66	
November		1,106 57	
December		1,115 77	
1904.			
January		114 10	
February		346 88	
March		2,518 05	
April		594 92	
May		2,363 43	
June		4,517 92	
	489 40	13,859 93	
Less		489 40	
			13,370 53

Expenditure.	
Salaries	$95,712 54
Provisions and supplies	36,200 49
Freight and packing charges, transportation, &c	27,451 18
Sundry expenses, rent, fuel, light, board of employees, repairs to trails, &c	17,425 94
Total	$176,790 15
Number of Employees.	
Main Line, Ashcroft to Northern Boundary	109
Port Simpson and Hazelton Branch	12
Horsefly Branch	3
Lillooet "	2
Barkerville "	1
Total	127

The revenue has shown an increase for every month with the exception of a small decrease in August and September; but the prospect of the early completion of the U.S. military cable from Seattle to Skagway and Valdez will seriously affect the receipts for the future, as all business to and from the U.S. military lines in Alaska will be practically diverted to the cable lines.

The volume of business has very materially increased during the past year. The revenue returns show an increase of 6,635 messages, and 171,740 words of press over 1902-03.

Local business also has improved somewhat, and I am of the opinion that this will be materially increased on both main and branch lines, more particularly on that part of the line between Quesnelle and Hazelton, as quite a number of settlers have taken up homesteads along the line in the Nechaco and Bulkley valleys, and as there is no mail communication the different stations in that part of the country should receive considerable business.

The expenditure has been kept down to as low a point as possible consistent with an efficient service. Prompt returns of all expenditures on the different divisions are made by the district superintendent, and all the salaries and accounts are settled monthly. The expenditure for the main line and branches are given separately, showing a deficit on the main line :—

Main line	$35,921 94
Port Simpson and Hazelton branch	12,480 19
Horsefly branch	1,014 47
Lillooet branch	428 98
	$49,845 58

to which must be added the expenditure made through the department at Ottawa, of which I have no record.

The Barkerville branch shows a small balance on the right side of $47.40.

The service on the line has been fairly well maintained considering the length of the line and the nature of the country through which it passes, and interruptions have not been so frequent nor of so long duration as in the previous year.

More refuge cabins have been built between stations and fitted with stoves, blankets and provisions, for the use of the linemen when out. Packing blankets and provisions and the length of time taken to make up a camp for the night was the cause of great delay in restoring communication.

The main line has been thoroughly gone over and put in good repair.

The Port Simpson and Hazelton branch has also received a thorough overhauling, and the service, since April last, has been fairly good compared with the previous year, and I fully expect that communication will be kept up with very little interruption during the winter months.

The Barkerville and Lillooet branches are in rather a bad condition. A great many poles require to be renewed and a general clearing of the line will be necessary. The appropriation voted last session is now being expended, and although not sufficient to do all the repairs that are necessary, will put the line in fairly good shape.

I made a trip of inspection to Hazelton, Port Simpson, Aberdeen and Telegraph Creek last summer, and found everything in connection with these offices in good condition.

All intervening stations on the line between Quesnelle and Atlin have been visited by the different line foremen, who have reported everything kept in a neat and clean condition, and provisions properly taken care of.

I regret to report the death of F. B. Gorrell, operator at Pike River, and W. S. Lanktree, operator at Yukon Crossing.

The former accidentally shot himself while out south of Pike River on December 30 last. Medical assistance was obtained as speedily as possible from Atlin, where he

was taken; but succumbed to his injuries shortly after reaching Atlin. His remains were sent east to Westport, Ont., at the request of his relatives.

Operator Lanktree was drowned in Rink rapids on June 7, by the upsetting of his canoe while out repairing the line. His body was recovered on June 11, and interment was made at White Horse.

All funeral expenses in connection with these accidents were paid by the department.

The services of several of the employees were dispensed with for neglect of duty, but, with the exception of these all of the employees have given good satisfaction and shown an active interest in the performance of their several duties.

I have the honour to be, sir,
Your obedient servant,

(Sgd) J. Y. ROCHESTER,
Acting Superintendent.

A Gobeil, Esq.,
Deputy Minister of Public Works,
Ottawa.

PART VI

REPORT OF THE COLLECTOR OF REVENUE

DEPARTMENT OF PUBLIC WORKS.

1903-1904.

COLLECTION OF REVENUE

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, November 14, 1904.

F. GELINAS, Esq.,
Secretary, Department of Public Works,
Ottawa.

SIR,—I have the honour of submitting my report for the year ended June 30, 1904.

I have examined the books and accounts of the officers under my control (excepting these of the Dock Master at Esquimalt), and it is my pleasing duty to state that in all cases the rules laid down for their guidance by the department have been carefully observed by these officers, who have faithfully accounted for all revenues collected by them.

During the past fiscal year the revenue accrued from Public Works shows a decrease of $20,506.73, being $107,950.90 while for the preceding year it amounted to $128,457.63.

The collections also show a decrease of $20,872.81 being $107,115.32, while in the preceding year they amounted to $127,988.13.

The revenue accrued from slides and booms was $71,331.20 or $6,661.28 less than in 1902-03. The collections were $70,495.62 or $7,027.36 less than the previous year. The outstanding uncollected dues on June 30 last, increased by $835.58.

The graving docks yielded $32,444.56 or $13,432.52 less than in 1902-03.

From the locks, the receipts were only $140.64 all of which was refunded under Order in Council of July 28, 1903.

From rents, the revenue was $4,034.50 being $84.49 more than in 1902-03.

Having dealt with the revenue in a general way, I beg to submit the particulars in detail relating to the several services under their respective heads.

SLIDES AND BOOMS.

OTTAWA DISTRICT.

The tolls charged up amounted to $41,756.85, or $4,580.53 less than in 1902-3.

The number of logs that passed through the works was 4,314,524, or 249,917 more than the preceding year.

Of square timber there were 15,092 pieces against 18,442 in 1902-03.

All the revenue accrued in this district during the year just closed was collected, excepting $637.37 which it is claimed should be written off.

Of the dues accrued since July 1, 1889, when this department took over the collection, there remains uncollected $10,473.67, full particulars of which will be found in statement No. 2, herewith.

Of the dues accrued prior to July 1, 1889, there remains uncollected $56,805.65, all of which should be written off. See statements Nos. 1 and 3, herewith for particulars.

The accounts for the Ottawa District stand thus :—

Dues accrued during the year 1903-04		$41,756 85
Collected	$41,119 48	
Outstanding June 30, 1904	637 37	
		$41,756 85

The amount outstanding in the Ottawa district, year by year being as follows:—

Dues accrued prior to the collection being transferred to this department			$56,805 65
Dues of	1889-90	$6,903 05	
"	1890-91	28 42	
"	1892-93	379 80	
"	1896-97	196 71	
"	1900-01	2,328 32	
"	1903-04	637 37	
			$10,473 67

I would again ask particular attention to the fact that since this department assumed the collection of these dues, of the amount accrued, viz., $795,917.44, all but $28.42, absolutely owing to the department has been collected ; the remainder above shown and aggregating $10.473.67, being composed of Chaudière boomage, $6,903.05, which should have been written off long ago, and the balance being covered by counter claims, which, if my information be correct with regard to them, ought to be allowed, excepting perhaps the item of 1903-04.

Herewith are statements in detail :—

No. 1.—Statement of amounts outstanding prior to July 1, 1889, uncollected September 30, 1904.

No. 2.—Statement of dues accrued at Ottawa since July 1, 1889, uncollected September 30, 1904.

No. 3.—Statement of amounts accrued at Quebec prior to July 1, 1889, uncollected September 30, 1904.

No. 4.—Statement of the number of pieces of square timber, saw logs, &c., which passed through the Ottawa works during the year ended June 30, 1904.

No. 5.—Statement of dues accrued from each of the slides and works in the Ottawa district during the year ended June 30, 1904.

In the face of facts adduced it is well to show where the decrease in the revenue has occurred.

There were decreases as follows, viz.: Main Ottawa, $456.05 ; Petewawa, $537.07 ; Madawaska, $1,507.31; Coulonge, $2,325.88 and Gatineau, $2,266.45, while the Chenaux boom shows an increase of $283.44, Dumoine, $726.61 and Black river, $1,502.18, leaving a net decrease on the whole of $4,580.53.

I would ask attention to the revenue from the Madawaska, formerly one of our largest revenue producing streams ; during the year just closed, it only yielded $1,451.58, the falling off being attributed to the exhaustion of the pine on most of the limits, while of that which remains, nearly all of the logs are either sawed at Whitney or brought to Ottawa by rail.

The revenue again falls short of the estimated income when the present tariff was imposed, but this can, I think, be largely attributed to the great number of small logs, formerly left in the woods, being now brought down and utilized, and I may say here that the constantly decreasing diameter of the logs brought down accounts for the fact that though the number may appear larger, yet the revenue being based on the board measure contents, is smaller.

Before closing these remarks on the Ottawa district, I would again respectfully urge the desirability of having the question of the arrears appearing as uncollected, brought before the Public Accounts Committee, not only those of the Ottawa district, but those from the other districts as well, so as to obtain the authority of parliament to write them off, as they are a source of friction between the government and the individuals interested, frequently preventing settlement of accounts justly due individuals, while the amounts standing against them should have been written off long ago.

ST. MAURICE DISTRICT.

The revenue from this district was $27,321.67, being $1,910.66 less than the preceding year.

The number of pieces of timber of all kinds which passed through the works was 2,682,250.

All the dues of 1903-04, were collected.

Since I took charge of this district, in 1892, all the revenue accrued has been collected.

The amount outstanding remains the same as at the close of the preceding year, viz.: June 30, 1903, namely, $14,481.49, all of which should be written off for reasons assigned in statement No. 6, herewith.

The spring of 1903, was a most remarkable one for this district, there being no rains until the beginning of June, in consequence, the water in the St. Maurice was very low, and up to that time it seemed as if the bulk of the logs would not come down for want of water, however, when the rains set in, the water rose satisfactorily and kept at a fair level for the remainder of the summer, thus though most of the logs came out, yet a great many remained in the tributaries and along the main river, which came down in spring of 1904, it is worthy of notice here that though the quantity of logs left along the river to come with the ice in the spring far surpassed that known for many years, yet the number which was lost through going out into the St. Lawrence was so small as to be hardly worth mention.

During the past summer an alligator warping tug was purchased and the utility of the machine established, for without it, it is doubtful if anything like the large quantity of logs handled at Grand Mère, could have been gotten below that point, and if not presuming too much, I would, in the interest of the department, urge the advisability of having one of these tugs ready at Three Rivers next spring before the ice breaks up, for, as a few hours has made it impossible to finish stretching the booms there, with this utensil, there is no saying exactly how much time would be saved, compared with the time required to handle these heavy booms by hand as in the past, and much of the risk of the 400,000 logs now in the river being lost by going out into the St. Lawrence obviated.

I trust I may be pardoned, if I again urge in view of the magnitude of the interests involved, the providing in the near future of a means of retaining the waters of the great lakes at the head of the St. Maurice, in the early spring months, and so providing against such disastrous floods as have occurred in the past, whereby the lumbermen suffer great loss of property, but the government also through the works being carried away or damaged, lost heavily, and this even in recent years. With some such a system for retaining the water in the spring, the supply during the dry months of midsummer could be regulated and much of the difficulties experienced in recent years, if not overcome, at least be modified to a great extent, as the forests are being denuded so rapidly, the snow melts more quickly than formerly in the spring, the water so resulting together with the usual spring rains, coming all at once, form a flood that is likely to be greater every year as time goes on.

The department is interested in a very great degree in devising such a system as suggested, having such large sums invested in the works on the St. Maurice, and moreover, if the logs are not prevented from going into the St. Lawrence, not only the lumberman is the loser, but the government is deprived of the revenue which it would otherwise have derived from the timber.

Such a scheme, if my information be correct, would not cost a very large outlay, considering the interests involved, and it would not be unreasonable to expect that not only the lumbermen, but the manufacturers, whose mills are driven by water, would gladly contribute to its cost and maintenance, while the provincial government might be asked to assist.

I may say here, lest any one might be carried away by an exaggerated idea of quantity, when the millions of logs taken out on the St. Maurice are mentioned, the

vast majority of the logs are spruce and a very great portion of them are very small, as they take for making pulp everything down to four inches at the small end, in fact I have seen some as small as two inches ; moreover, as the proportion of this small stuff is constantly increasing, it may be easily understood why, though the number of logs has rapidly increased, the revenue has not increased as it would if the logs were of a larger size, since this small stuff pays a much smaller rate than the logs of 10 inches and upwards in diameter.

I may say in conclusion that every precaution should be taken to handle an unusually large quantity next year, for besides the 400,000 logs in the river now, it is probable that the number of logs to be made this winter will exceed 5,000,000 pieces.

NEWCASTLE DISTRICT.

The dues accrued from this district during the year amounted to $2,252.68, all of which was collected, but $198.21 due by Gilmour & Co.

The total outstanding uncollected on June 30, 1904, was $8,323.81, of which $3,521.19 should be written off in accordance with a judgment in the Exchequer court: the remainder consists of an account in the hands of the Department of Justice for collection and amount due by Gilmour & Co. See statement No. 7 for details.

With regard to this latter, I may say that they are in treaty with another department of the government for the sale of certain properties owned by them, which would be of very great use to the government and settlement of the account with this department is only waiting the decision as to this sale, whether favourable or not.

GRAVING DOCKS.

ESQUIMALT GRAVING DOCK.

The revenue from this source was $9,881.35 shown in detail in statement No. 8, herewith, being less than the previous year by $3,787.65.

Of the 154 days the dock was occupied during the year, it was used by the British navy for 128 days, Canadian government vessels for 4 days, and by the mercantile marine for 22 days.

LÉVIS GRAVING DOCK.

The revenue from this work was $8,315.05 less than for the previous year, being for 1903-04, $15,573.85. See statement No. 9 herewith.

The dock was occupied for 115 days exclusive of the winter months, during which it was occupied by steamship 'Campana' steamer 'Admiral,' government dredge 'No. 6' and tug 'Storm King.'

KINGSTON GRAVING DOCK.

The dock was occupied for only 80½ days exclusive of winter months. The income for the past year was $6,989.36 or $1,329.83 less than in 1902-03. See statement No. 10 for details.

LOCKS.

By Order in Council of July 28, 1903, the tolls on the locks were abolished for two years, and all tolls collected since the beginning of navigation of 1903, directed to be refunded.

RIVIÈRE DU LIÈVRE LOCK.

The tolls collected amounted to $42.12, which were refunded.

RIVIÈRE YAMASKA LOCK.

The receipts from this work were $98.52 also refunded.

RENTS.

The collections on this account were as follows :—

From old post office building, Victoria, B.C.	$3,792 00
" " " St. John, N.B.	112 50
" water lot, Port Morien, N.S.	1 00
" part Toronto island.	1 00
" land in Kingston, Ont.	1 00
" part graving dock premises, Kingston, Ont.	125 00
" part reserve, Victoria island, Ottawa, Ont.	2 00
	$4,034 50

There are no rents uncollected on claims in my hands.

Thus the total revenue that passed through my hands during the year ended June 30, 1904, may be summarized as follows :—

From slides and booms	$ 70,495 62
Graving docks	32,444 56
Locks	140 64
Rents	4,034 50
	$107,115 32

The following comparative table of Public Works revenue accrued 1903-04 and 1902-03, shows at a glance in what accounts the increases and decreases herein referred to occurred :—

—	Year. 1903-04.	Year. 1902-03.	Increase. 1903-04.	Decrease. 1903-4.
SLIDES AND BOOMS.	$ cts.	$ cts.	$ cts.	$ cts.
Ottawa District	41,756 85	46,337 38		4,580 53
St. Maurice District	27,321 67	29,232 33		1,910 66
Newcastle District	2,252 68	2,422 77		170 09
	71,331 20	77,992 48		6,661 28
GRAVING DOCKS.				
Esquimalt, B.C.	9,881 35	13,669 00		3,787 65
Lévis, Que	15,573 85	23,888 90		8,315 05
Kingston, Ont.	6,989 36	8,319 18		1,329 82
	32,444 56	45,877 08		13,432 52
LOCKS.				
Rivière du Lièvre	42 12	279 78		237 66
Rivière Yamaska	98 52	358 28		259 76
	140 64	638 06		497 42
Rents	4,034 50	3,950 01	84 49	

No. 1.—Statement of Slidage and Boomage from the Ottawa Slides and Works, accrued prior to July 1, 1889, Outstanding June 30, 1904, and remaining uncollected on September 30, 1904.

By Whom due.	Bad and Doubtful Debts.	Chaudière Boomage in Suspense.	Other Slide and Boom Dues Disputed.	Total Outstanding on Sept. 30, 1902.	Year to which Dues Belong.	Remarks.
	$ cts.	$ cts.	$ cts.	$ cts.		
John & Wm. McLean	53 14			53 14	1873	Insolvent.
John Rowan	342 50			342 50	1872-1873	"
Lemieux & Charette	21 30			21 30	1873	"
Taillon & Lapierre	148 10			148 10	1873-1874	"
Mosgrove & McHarry	261 42			261 42	1873-1874	"
W. C. Wells	600 90			600 90	1873-1874	"
Dufresne & McGarity	528 80			528 80	1874-1875	"
Walton Smith	171 46			171 46	1874-1875	"
A. H. Baldwin	3,507 92			3,507 92	1871 to 1874	"
Hon. James Skead	9,807 65			9,807 65	1861, 1863, 1864, 1869, 1875 to 1878	"
Batson & Currier	5,558 70			5,558 70	1875 to 1877	"
A. F. A. Knight	546 30			546 30	1878	"
James Walker	11 25			11 25	1877	"
R. Campbell & Son	1,558 50			1,558 50	1879 to 1881	"
James G. Bryson	73 50			73 50	1886	"
Costello Bros	90 62			90 62	1882	"
N. E. Cormier	428 34			428 34	1888	"
James Ynill	9 29			9 29	1876	Overcharge.
J. & B. Grier	76 84			76 84	1883	"
R. & W. Conroy	95 42			95 42	1882-1883	" reported in return S—38, for March, 1886.
A. & P. White	101 00			101 00	1881	"
B. Caldwell & Son	4 33			4 33	1887	"
J. R. Booth		9,871 93	398 88	10,270 81	1881 to 1888	$398.88, counter claim for damages by the breaking of Coulonge Boom.
Perley & Pattee		8,889 85		8,889 85	1881 to 1888	
The Bronsons & Weston Lumber Co.		8,180 79		8,180 79	1881 to 1888	
Pierce & Co		462 18		462 18	1888	
G. A. Grier & Co		1,060 59		1,060 59	1886-1887	*Chaudière boomage. These parties claim that they have maintained these works wholly at their own expense since 1881.
Estate late Levi Young		1,461 20		1,461 20	1881 to 1885	
Wm. Mason		413 85		413 85	1881 to 1888	
Gilmour & Co		406 27		406 27	1884	
John Rochester		258 88		258 88	1881 to 1883	

J. & G. Bryson	.....	.....	252 20	252 20	1886	Counter claim for damage by breaking of Coulonge Works.
	23,997 28	31,006 54	651 08	55,653 90		

Department of Public Works,
Ottawa, September 30, 1904.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

No. 2.—Statement of Slide and Boom Dues accrued from the Ottawa River Works since July 1, 1889, Outstanding on September 30, 1904.

Name.	Year to which Dues belong.	Chaudière Boomage in Suspense.	Ordinary Dues.	Total Outstanding	Remarks.
		$ cts.	$ cts.	$ cts.	
J. R. Booth	1889-90	2,561 69	.....	2,561 69	
The Bronsons & Weston L. Co	1889-90	2,056 96	.....	2,056 96	Chaudière boomage reported to Council, and referred to Treasury Board, should be written off.
Perley & Pattee	1889-90	1,203 26	.....	1,203 26	
Wm. Mason & Sons	1889-90	167 66	.....	167 66	
Pierce & Co.	1889-90	913 48	.....	913 48	
Alex. Fraser Acc. Thos. Stephens	1890-91	.....	28 42	28 42	Legal action taken to recover this.
J. R. Booth	1892-93	.....	379 80	379 80	Retained by Mr. Booth in settlement of an account due him which the Auditor General refuses to pay, as Mr. Booth appears to be in arrears in this and Statement No. 1.
Bryson & Fraser	1896	.....	196 71	196 71	Have counter claim for work done on slide to this amount.
McLachlin Bros	1900	.....	2,328 32	2,328 32	Have counter claim for damages to logs in consequence of break in Black River slide.
J. R. Booth	1903-04	.....	339 27	339 27	These two parties claim that as a slide on the Petawawa is not now used, no charge should be exacted.
Hawkesbury Lumber Co	1903-04	.....	298 10	298 10	
		6,903 05	3,570 62	10,173 67	

EDWARD T. SMITH,
Collector of Public Works Revenue.

Department of Public Works,
Ottawa, September 30, 1904.

No. 3.—Statement of Outstanding Slide Dues, Ottawa District, Bonds for which were sent to Quebec for Collection.

Name.	From 1860.	From 1861.	Total.
	$ cts.	$ cts.	$ cts.
Hon. James Skead	245 00	210 00	455 00
James Mair		696 75	696 75
	245 00	906 75	1,151 75

These amounts were uncollected, as the parties claimed damages for loss caused by the Madawaska boom breaking in 1860.

A decision on their claims was not arrived at till August 2, 1869. On the 5th idem Messrs. Skead and Mair were notified that the department could not recognize their claim.

To the best of my knowledge, this decision was never communicated to the collector of slide dues, consequently these accounts remained in abeyance.

Since then both parties died, and I believe both were insolvent at the time of their death.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

Department of Public Works,
Ottawa, September 30, 1904.

No. 4.—Statement of the number of pieces of Square Timber, Saw-logs, &c., that passed through the Government Slide and Works on the River Ottawa and its tributaries during the fiscal year ended June 30, 1904.

	Pieces.
Square timber	15,092
Saw-logs	4,314,524
Boom and dimension timber	151,598
Cedars	141,362
Railroad ties	466,124
Fence posts	139,077
Total	5,227,777

Also 13,672 31-100 cords pulpwood.

Revenue accrued on the above was $41,756.85.

EDWARD T. SMITH,
Collector of Public Works Revenue.

Department of Public Works,
Ottawa, September 30, 1904.

No. 5.—STATEMENT showing the dues accrued on the under-mentioned works on the River Ottawa and its tributaries during the fiscal year ended June 30, 1904 :—

River or Other Improvement.	Amount.
Main Ottawa	$4,747 85
Cheneaux Boom	7,475 01
River Petewawa	7,831 31
River Madawaska	1,451 58
River Coulonge	6,328 08
River Dumoine	1,043 48
Black River	6,390 46
Gatineau	6,489 08
	$41,756 85

Amounting to $41,756.85.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, September 30, 1904.

No. 6.—STATEMENT of Slide and Boom Dues from the St. Maurice Slides and Works outstanding on June 30, 1904, and remaining uncollected on September 30, 1904.

Name.	Year to which Dues belong.	Amount.	Total.	Remarks.
		$ cts.	$ cts.	
George Baptist, Son & Co.	1878	469 95		
"	1879	2,110 62		
"	1880	1,696 18		
"	1881	293 69		Have counter claims for damages to logs caused by the booms not being stretched early enough in the spring of 1878 to prevent the logs going over the chutes.
"	1882	165 80		
"	1884	118 50		
"	1888	4 28		
			4,859 02	These claims were submitted to Special Commissioner, Mr. McDougall, afterwards Judge, who, after hearing the evidence on both sides, recommended that the claims of the parties should be allowed.
Ross, Ritchie & Co	1878	3,072 84		
"	1883	2,173 68		
"	1884	28 96		
"	1886	1 62		
"	1887	4 38		
			5,281 48	
Alex. Baptist	1879		2,116 96	
Wm. Ritchie & Co	1888	779 24		
"	1889	332 11		
			1,111 35	Of this amount, $754.20 is claimed to be an overcharge. Insolvent.
Ritchie Bros	1886	413 43		
"	1887	634 71		
			1,048 14	This amount is composed of overcharges in 1886 and 1887 of $842.76 and overpayment in 1884 of $205.38.
G. B. Hall	1890		49 34	Insolvent.
T. E. Normand	1890		42 28	Claims that this balance is an overcharge.
Treffle Biron	1891		0 92	Would cost more to collect than it is worth.
			14,481 49	

To make this balance agree with the Public Accounts, there should be deducted $7.93 over credited Alex. Baptist, and $217.17 added thereto, being $190.40 paid July 23, 1884, and $26.77 over charged in error to Wm. Little, not in any of the collector's returns, which will give balance due September 30, 1894, of $14,690.73.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, September 30, 1904.

No. 7—STATEMENT of Slide and Boom Dues accrued from the Newcastle and Trent River Works, outstanding on June 30, 1904, and remaining uncollected September 30, 1904.

Name.	Year to which Dues belong.	Amounts disputed.	Ordinary Dues.	Total.	Remarks.
		$ cts.	$ cts	$ cts.	
Irwin & Boyd	1881	59 79		59 79	Insolvent.
Thomson & McArthur	1880	52 78		52 78	
Jabez Thurston	1882	12 50		12 50	
McDougall & Ludgate	1879	65 07		65 07	
Bigelow & Trounce	1882 to 1885	216 21		216 21	
R. G. Strickland	1882, '83, '85, '86, and '87	215 08		215 08	
Est. late Geo. Hilliard	1877 to 1883 and 1886	354 15		354 15	Dead and estate distributed.
T. G. Hazlett	1881, '82, '84 to '89	885 25		885 25	According to judgment in Exchequer Court, *re* Boyd *vs.* Smith, these cannot be collected.
J. M. Irwin	1882, '83, '85 to '88	698 45		698 45	
D. Ullyot	1881 to 1887	547 68		547 68	
Green & Ellis	1881 to '83, '85, '88 and '89	157 01		157 01	
A. W. Parkin	1884, '85, '88, '90 and '91	65 92		65 92	
The Dickson Estate	1883	137 50		137 50	
Alfred McDonald	1888	40 80		40 80	
John Parkin	1889	13 00		13 00	
Gilmour & Co	1893, '94, '95, 1900, '01, '02, '03		4,766 92	4,766 92	Sent to Dept. of Justice for collection.
John Dovey	1894, '95, '96		35 70	35 70	
		3,521 19	4,802 62	8,323 81	

EDWARD T. SMITH.
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, September 30, 1904.

No. 8.—THE DRY DOCK AT ESQUIMALT, B.C.

STATEMENT of Dues and other Charges collected during the Year ended June 30, 1904.

Name of Vessel Docked.	Tonnage.	Period of Dockage. From	To	Dockage Charges.	Other Charges.	Total.
		1903.	1903.	$ cts.	$ cts.	$ cts.
Str. Robert Adamson	2,992	July 6..	July 14	1,100 00	18 60	1,118 69
Ship Columbia	2,577	" 15..	" 15..	400 00	1 80	401 80
		Shortage in May.		0 05		0 05
S.S. Elba	4,036	Oct. 5..	Oct. 6..	400 00	1 80	401 80
H.M.S. Shearwater	980	" 26..	" 28..	127 44		127 44
H.M.S. Flora	4,360	Nov. 11..	Nov. 16.	271 63		271 63
H.M.S. Grafton	7,500	" 25..	Dec. 4..	453 82		453 82
S.S Moana	3,915	Dec. 4...	" 13..			
		Less 3 lay days on 3,950 tons		995 00	70 29	1,065 29
		Overpaid		0 01		0 01
			1904.			
H.M.S. Flora	4,360	Dec. 14..	Mar. 24..	3,759 35		3,759 35
		1904.				
Ship Forteviot	3,145	Mar. 30 .	" 31..	503 00	3 00	506 00
S.S. Inverness	3,734	Apl. 2 .	Apl. 3..	400 00	1 80	401 80
H.M.S. Shearwater	980	" 7..	" 14..	298 25		298 25
S.S Garonne	3,876	May 7..	May 10 .	636 00	9 00	645 00
H.M.S. Flora		Short paid in March.		34 25		34 25
H.M.S. Shearwater		"	April..	2 66		2 66
Str. Quadra	573	May 16..	May 20..	390 00	3 60	393 60
	43,028			9,771 46	109 89	9,881 35

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, September 30, 1904.

No. 9.—THE DRY DOCK AT LÉVIS, QUE.

STATEMENT of Dues and other Charges collected during the Year ended June 30, 1904.

Name of Vessel Docked.	Tonnage.	Period of Dockage.		Dockage Charges.	Other Charges.	Total.
		From	To			
		1903.	1903.	$ cts.	$ cts.	$ cts.
S.S. Norwegian	3,523	Entry fee.		200 00		200 00
"		July 15.	July 24.	1,284 14		1,284 14
S.S. Fridtjoff Nansen	3,275	Entry fee.		200 00		200 00
"		July 24	July 30.	893 00	2 00	895 00
Bark Sardhana	1,146	Entry fee.		200 00		200 00
"		Aug. 1.	Aug. 29	1,593 96		1,593 96
S.S. Manchester Trader	3,318	Entry fee.		200 00		200 00
"		Aug. 31.	Sept. 19.	2,410 84	2,440 00	4,850 84
Bark Sardhana		Entry fee.		200 00		200 00
"	1,146	Sept. 20.	Sept. 21.	201 57		201 57
S.S. Bergenhaus		Entry fee.		200 00		200 00
"	3,606	Sept. 25.	Oct. 10.	2,031 80		2,031 80
"			Over paid.	0 04		0 04
S.S. Campana	1,697	Entry fee.		200 00		200 00
"		Wintering		800 00	4 00	804 00
Str. Admiral		Entry fee.		200 00		200 00
"		Wintering		200 00		200 00
Steam Barge Orion	846	May 3.	May 9.	553 80	1 00	554 80
Dredge International	470	Oct. 17.	Oct. 27.	535 00		535 00
			1904.			
Tug Storm King and Dredge No. 6		Nov. 26.	April 26.			
		Wintering		400 00		400 00
		1904.				
Dredge International	470	May 14.	May 18.	394 00		394 00
S.S. Gauss	650	June 20.	Entry fee.	200 00		200 00
CASUAL REVENUE.						
For old pipes sold to C. F. Langlois			$28 70			28 70
	20,147		$28 70	13,098 15	2,447 00	15,573 85

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, September 30, 1904.

No. 10.—THE DRY DOCK AT KINGSTON, ONT.

STATEMENT of Dues and other Charges collected during the Year ended June 30, 1904.

Name of Vessel Docked.	Tonnage.	Period of Dockage. From	To	Dockage Charges.	Other Charges.	Total.
		1903.	1903.	$ cts.	$ cts.	$ cts.
Str. D. D. Calvin	750	June 30.	July 2.	188 00		188 00
" Orion	846	July 8.	" 17.	549 14	5 00	554 14
Barge Muskoka	481	" 23.	" 24.	96 20		96 20
Str. Rideau Queen	350	" 25.	" 26.	70 00		70 00
" Myles	1,198	" 26.	" 27.	169 80		169 80
Barge Star	321	Aug. 1.	Aug. 1.	64 20	5 00	69 20
Str. Wahcondah	1,747	" 9.	" 10.	224 70		224 70
Barge Acadia	374	" 13.	" 14.	74 80		74 80
Tug Geo. D. Seymour	76	" 19.	" 19.	20 00		20 00
Govt. tug Delisle	45	July 3.	July 22.	170 00		170 00
Str. Erin	1,237	Aug. 31.	Sept. 11.	1,050 10	18 00	1,068 10
Tug Bronson	137	Sept. 11.	" 13.	47 40		47 40
Barge Minnedosa	1,041	" 30.	Oct. 1.	154 10		154 10
Tug Mary P. Hall	96	Oct. 1.	" 1.	20 00	5 00	25 00
Str. Bothnia	833	" 9.	" 10.	162 46		162 46
" Hecla	1,110	" 10.	" 13.	316 40	3 00	319 40
" Orion	846	" 14.	" 17.	253 04		253 04
" Avon	1,417	" 19.	" 22.	390 08		390 08
" J. C. Howard	1,244	" 28.	" 31.	359 06	5 00	364 06
" Chicora	930	Nov. 2.	Nov. 3.	175 55		175 55
Tug Bronson	137	" 3.	" 4.	27 40	3 00	30 40
Barge Augustus	802	Dec. 3.	Dec. 4.	130 20	3 00	133 20
" Kildonan	523	" 5.	" 6.	102 30	3 00	105 30
Str. Chicora		Entry fee.		100 00		100 00
"	930	Dec. 17.	Mar. 19.	840 50	15 00	855 50
Str. D. D. Calvin	750	April 21.	April 22.	151 25		151 25
Barge Ceylon	908	" 25.	" 27.	172 58		172 58
" Augustus	802	" 29.	" 30.	151 20		151 20
" Hector	539	May 6.	May 7.	103 90		103 90
Str. Bothnia	833	" 12.	" 12.	154 30		154 30
Tug H. F. Bronson	137	" 25.	" 26.	27 40		27 40
Str. Chicora					30 00	30 00
Tug Jessie Hall	56	May 30.	May 31.	20 00		20 00
" Emerson	276	June 7.	June 7.	55 20		55 20
Ship Turbinia	1,064	" 18.	" '19.	156 40		156 40
Str. St. Lawrence					10 00	10 00
Govt. dredge Sir Richard, tug and 2 scows	250	April 30.	May 5.	130 50	6 20	136 70
	23,086			6,878 16	111 20	6,989 36

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, September 30, 1904.

PART VII

MISCELLANEOUS

ACTS OF PARLIAMENT, PASSED AT SESSION OF 1904, HAVING REFERENCE TO THIS DEPARTMENT.

CONTRACTS LET BY THE DEPARTMENT.

PROPERTY PURCHASED OR SOLD.

PROPERTY, LEASED TO OR BY THE DEPARTMENT.

CURATOR'S REPORT, NATIONAL ART GALLERY.

NAMES OF CHIEF OFFICERS OF THE DEPARTMENT.

NAMES OF OFFICIALS EMPLOYED ON SLIDES AND BOOMS.

NAMES OF PERSONS EMPLOYED ON GRAVING DOCKS.

NAMES OF ENGINEERS, FIREMEN AND CARETAKERS OF PUBLIC BUILDINGS.

AND THE OFFICIAL CORRESPONDENCE OF THE DEPARTMENT

FOR THE

FISCAL YEAR ENDED JUNE 30, 1904.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, December 10, 1904.

FRED GÉLINAS, Esq.,
Secretary of the Department of Public Works,
Ottawa.

SIR,—I have the honour to send you herewith the following statements concerning the transactions of the department during the last fiscal year with respect to contracts and property, and which are required for insertion in the annual report, 1903-04, viz.:—

No. 1.—Statement of contracts let by this department during the fiscal year ended June 30 last.

No. 2.—Statement of property purchased and sold by this department during the same period.

No. 3.—Statement of property leased to and by the said department during the same period ; and

No. 4.—A list of some of the Public Acts of the Parliament of Canada passed at the last session and Orders in Council having reference to the department.

I have the honour to be, sir,

Your obedient servant,

J. A. CHASSE,
Law Clerk.

STATEMENTS

SHOWING

1ST.—CONTRACTS LET BY THE DEPARTMENT OF PUBLIC WORKS OF CANADA, FROM JUNE 30, 1903 TO JUNE 30, 1904.

2ND.—PROPERTY PURCHASED OR SOLD BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR ENDED JUNE 30, 1904.

3RD.—PROPERTY LEASED TO AND BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR ENDED JUNE 30, 1904.

No. 1.—CONTRACTS let by the Department of Public Works of Canada from the 30th June, 1903, to the 30th June, 1904.

Works.		Names of Contractors.	Date of Contract	Amount.
PUBLIC BUILDINGS.				$ cts.
Nova Scotia.				
Amherst, Post Office building.	Supply of coal....	Maritime Coal Co., Ltd..	Sept. 5, 1903	188 76
Annapolis "	"	A. M. King	Aug. 24, 1903	203 35
Antigonish "	" ...	Acadia Coal Co., Ltd. ..	Sept. 18, 1903	93 93
Arichat "	"	Baptiste Girroir.....	Aug. 21, 1903	270 00
Baddeck "	"	Cape Breton Mining Coal Co.	Nov. 16, 1903	127 50
Dartmouth "	"	Minudie Coal Co., Ltd..	Oct. 21, 1903	159 20
Digby "	"	Wm. E. Van Blarcom...	Aug. 22, 1903	190 00
" "	Tower clock	Ferguson & Page.....	May 27, 1903	1,650 00
Guysborough "	Supply of coal ...	James Kenna.....	Oct. 5, 1903	
Halifax, Dominion Building.	"	Acadia Coal Co., Ltd. ..	Nov. 21, 1903	1,461 14
" Ass't. Rec. Genl's Office	"	"	" 21, 1903	
" Immigration Building	"	" ...	" 21, 1903	299 36
" Examining Wharehouse	" ...	"	" 21, 1903	
" Ass't. Rec. Genl's Office	"	Geo. E. Boak & Co.... .	Sept. 2, 1903	51 40
" Immigration Building	"	"	" 2, 1903	75 20
Liverpool, Post Office building	" ..	James Kenna.....	Oct. 5, 1903	210 00
Lunenburg "	"	John B. Young	" 5, 1903	205 50
New Glasgow "	" ..	Acadia Coal Co.. Ltd. ..	Sept. 18, 1903	121 68
North Sydney "	"	Cape Breton Coal Mining Co	Nov. 16, 1903	178 75
Pictou "	"	Chs. W. Ives	Sept. 8, 1903	134 40
" Custom House	"	"	" 8, 1903	162 62
Springhill, Post Office	" .. .	Cumberland Ry. & Coal Co	Oct. 16, 1903	225 80
Sydney "	" ...	T. Routledge	Sept. 30, 1903	135 45
" Post Office & Building.	Alterations, &c...	Rhodes, Curry & Co., Ltd	Feb. 27, 1904	15,750 00
Truro, Post Office Building.	Supply of coal....	Acadia Coal Co.....	Oct. 14, 1903	107 50
Windsor, Post Office & Building	"	"	Sept. 18, 1903	131 37
" "	"	M. H. Goudge & Son....	Aug. 31, 1903	184 80
Yarmouth "	"	Killam Bros....	Sept. 1, 1903	325 00
Prince Edward Island.				
Charlottetown, Post Office.	Alterations & additions to.....	H. S. Lowe Bros.....	Aug. 25, 1903	11,155 00
" "	Copper work to roof.	Stanley, Shaw & Co.....	June 13, 1904	4,278 00
" Public Building.	Alterations to savings bank.....	H. E. S. Lowe.....	Mar. 19, 1904	1,225 00
" "	Supply of coal ...	A. Pickard & Co... ..	Oct. 6, 1903	590 19
Montague, Post Office	" ...	Geo. Wightman.	Aug. 27, 1903	92 78
Summerside "	"	Joseph Read & Co ..	" 31, 1903	370 13
New Brunswick.				
Bathurst, Post Office.	Supply of coal....	John Russel & Co..	Sept. 12, 1903	450 19
Chatham "	"	"	" 12, 1903	297 07
" "	"	Minudie Coal Co., Ltd..	Oct. 3, 1903	86 50
Dalhousie "	"	" .	" 3, 1903	57 87
" "	"	Joseph H. Taylor.....	Sept. 28, 1903	207 57
Fredericton "	"	Patrick Farrell	Oct. 22, 1903	289 88
" Construction of Officers' new stables..		C. J. B. Simmons.....	July 9, 1903	2,110 00
" " of Sergeant-Majors quarters...		"	Aug. 3, 1903	2,118 00
Marysville, Post Office.	Supply of coal...	Minudie Coal Co., Ltd..	Oct. 21, 1903	
Moncton "	"	" .	Oct. 3, 1903	260 41
Newcastle, Post Office.	Supply of coal....	R. R. Call....	Sept. 12, 1903	282 88
Partridge Island, Quar. Stn.	Heating apparatus	R. E. Fitzgerald.... ...	Jan. 27, 1904	1,900 00
" "	Electrical plant...	The Acetylene Construction Co.	May 15, 1904	4,625 00
Richibucto, Public Building.	Heating apparatus	Frank Powers	Oct. 29, 1903	799 00
" "	Fittings..... .	James Reid.....	April 14, 1904	2,000 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.		Names of Contractors.	Date of Contract	Amount.
PUBLIC BUILDINGS—*Continued.*				$ cts.
New Brunswick—Concluded.				
Richibucto, Post Office.	Supply of coal	J. & T. Jardine	Sept. 18, 1903	
St. John "	"	R. P. & W. F. Starr	Oct. 21, 1903	53 96
" Savings Bank	"	" "	" "	31 38
" Custom House	"	" "	" "	38 75
" Immigrant Building	"	" "	" "	128 35
" West. Post Office	"	Vroom & Arnold	" "	40 50
" "	"	"	" "	752 70
" Savings Bank	"	"	" "	269 66
" Custom House	"	"	" "	1,679 64
" Immigrant Building	"	"	" "	1,178 43
" Post Office	"	Minudie Coal Co., Ltd.	" "	25 38
" Savings Bank	"	"	" "	21 75
" Custom House	"	"	" "	21 00
St. Stephens, Post Office	"	Purves & Graham	Sept. 29, 1903	166 80
Sussex "	"	C. N. Short	Oct. 12, 1903	428 95
Tracadie, Lazaretto	"	R. R. Call	Sept. 4, 1903	876 61
" "	Disinfecting apparatus	P. Campbell & Co.	May 31, 1904	1,315 00
Woodstock, Post Office.	Supply of coal	Purves & Graham	Sept. 29, 1903	279 29
Quebec.				
Acton Vale.	Construction of Post Office bldg	Joseph Bourque	June 28, 1904	10,250 00
Aylmer. Post Office.	Supply of coal	J. G. Butterworth & Co.	Sept. 14, 1903	117 75
Berthierville "	"	Lamarche & Boulanger	" 29, 1903	105 77
Coaticook "	"	W. C. Webster & Son	Aug. 19, 1903	511 53
Drummondville "	"	The Pensylvania Coal Co	Oct. 2, 1903	160 00
Farnham "	"	J. A. Léquin	Aug. 20, 1903	56 00
Fraserville "	"	Nap. Dion	Sept. 15, 1903	278 75
Hochelaga "	"	T. F. Moore Co	Oct. 2, 1903	168 78
Hull "	"	Hull Coal Co	Aug. 28, 1903	76 51
Joliette "	"	S. Bourgeois	" 29, 1903	237 96
Lachine "	"	Joseph Allard	Oct. 8, 1903	162 00
Laprairie "	"	J. B. H. Beauvais	Aug. 28, 1903	105 83
L'Assomption "	"	J. E. Archambault	Sept. 21, 1903	212 50
" "	Heating apparatus	Alex. Mackay & Co	Oct. 20, 1903	855 00
" Public Building.	Fixtures	E. Piché	Jan. 13, 1904	1,175 60
Montreal, Post Office.	Rep'rs to elevators	The Fensom Elevator Co., Ltd.	" 23, 1904	5,700 00
" Ex'g Warehouse.	Six freight elevators	" "	Mar. 28, 1904	23,000 00
" "	Supply of coal	T. F. Moore Co	Oct. 2, 1903	2,523 01
" Custom House	"	L. Cohen & Son	" "	750 82
" Post Office	"	Wilson Frères	" "	877 50
" Revenue Building	"	"	" "	250 05
Quebec, Cullers' Office	"	Joseph Gingras	Nov. 9, 1903	194 30
" Marine Agency	"	"	Oct. 9, 1903	504 64
" St. Roch Post Office	"	"	" "	32 24
Quebec, Custom House.	Supply of coal	Archer & Co	Nov. 9, 1903	111 56
" Ex'g. Warehouse	"	"	" 9, 1903	1,746 22
" Immigrant office	"	"	" 9, 1903	245 00
" Post Office	"	"	" 9, 1903	904 24
" Custom House	"	M. Madden	" 9, 1903	838 82
" Iron Foundry.	Installation of elect. light.	C. Vézina	Mar. 7, 1904	545 00
" "	Heating apparatus	O. Picard et fils	May 16, 1904	1,565 00
Richmond, Post Office.	Supply of coal	J. D. Smith	Oct. 8, 1903	274 89
St. Henri "	"	T. F. Moore Co	" 2, 1903	202 84
St. Hyacinthe "	"	C. Rouleau et fils	" 15, 1903	468 02
"	Construction of Inland Revenue building	Paquet & Godbout	July 30, 1903	21,089 00
"	Public Bldg. Additional excavation.	"	Sept. 2, 1903	654 00
"	Inland Revenue Bldg. Heating apparatus.	Pierre Therrien	June 9, 1904	1,100 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract	Amount.
PUBLIC BUILDINGS—*Continued.*			$ cts.
Quebec—Concluded.			
St. Jerome. Post Office. Supply of coal	Chas. Godmer	Aug. 31, 1903	206 75
St. Johns " "	Jules Audette	" 27, 1903	103 56
Sherbrooke " "	Jean Huot	Sept. 30, 1903	357 30
Sorel " "	Alfred Lavalée	Aug. 27, 1903	285 00
" Shipyard "	The Nova Scotia Steel and Coal Co	June 9, 1904	49,800 00
" Post Office. Installation of elect. lights	J. Rousseau & Co.	April 25, 1904	675 00
Thetford Mines. Construction of Post Office	Dusseault & Pageau	Aug. 8, 1903	6,735 75
Three Rivers. Post Office. Supply of coal	John Ryan & Son	" 20, 1903	187 44
" Custom House "	"	" 20, 1903	349 74
Valleyfield, Post Office "	Besner & Charles	Sept. 9, 1903	52 00
" Construction of public building	Théodore Bélanger	" 14, 1904	32,500 00
Victoriaville. Post Office. Supply of coal	F. Beauchesne	" 25, 1903	213 52
Ontario.			
Alexandria. Construction of a Post Office building	Joseph Bourque	Oct. 23, 1903	10,750 00
Almonte. Post Office. Supply of coal	Wm. McArthur	" 9, 1903	189 00
Amherstburg " "	Falls Bros	" 6, 1903	274 87
Arnprior " "	J. S. Moir	Sept. 14, 1903	237 06
Barrie " "	The Sargeant Co.	Aug. 25, 1903	245 00
Belleville " "	C. C. Leavens	Sept. 15, 1903	663 00
Berlin " "	The Connel Anthracite Mining Co.	Oct. 5, 1903	229 29
" Public Bldg. Lighting and fixtures	The Berlin Electric Co.	Dec. 16, 1903	534 60
Bowmanville. Construction of Post Office and building	Wm. Stuart	Nov. 2, 1903	17,768 80
Brampton, Post Office. Supply of coal	Peaker & Son	Oct. 1, 1903	197 82
Brantford " "	The Brantford Coal Co., Ltd	Aug. 28, 1903	178 29
" Drill Hall. Additions and alterations to	The Schultz Bros. Co., Ltd	June 9, 1904	25,750 00
Brockville, Post Office. Supply of coal	Central Canada Coal Co.	Aug. 21, 1903	399 67
Carleton Place " "	Taylor Bros. & Co.	Sept. 28, 1903	181 25
Cayuga " "	A. J. Grant	Aug. 29, 1903	105 12
Chatham " "	A. R. Crowe	" 19, 1903	175 33
Clinton " "	Howland Bros	" 29, 1903	125 30
" Public Building. Fittings, plumbing, &c.	S. S. Cooper	" 26, 1903	2,500 00
Cobourg, Post Office, Supply of coal	Geo. Plunkett	" 19, 1903	215 30
" Construction of Armoury	D. S. Booth	Feb. 24, 1904	35,550 00
Cornwall, Post Office. Supply of coal	A. F Mulkern & Co	Sept. 29, 1903	300 00
Deseronto, Post Office. Supply of coal	The Rathbun Co	Oct. 5, 1903	520 80
Dundas " "	Chas. Sturrock	" 2, 1903	45 65
" Drill Hall. Installation of elect. light	H. Aukland	Feb. 9, 1903	204 75
Fort William, Post Office. Supply of coal	Louis Walsh Coal Co.	Oct. 19, 1903	221 25
" Pub. Build'g. Heating apparatus.	Alex. Cameron	" 7, 1903	1,705 00
" Post Office and Customs. Fittings.	Robert Cameron	Jan. 9, 1904	3,600 00
Galt, Post Office Supply of coal	Scott & Hogg	Oct. 6, 1903	184 00
Gananoque " "	Cowan & Britton	" 24, 1903	97 57
" Custom House "	" "	" 24, 1903	148 37
Goderich, Post Office "	Wm. Lee	Aug. 22, 1903	390 77
Guelph " "	M. F. Cray	" 21, 1903	339 91
" Public Building. Works in attic	L. C. Wideman	May 9, 1904	2,860 00
Hamilton, Post Office. Supply of coal	The Rogers Coal Co.	Nov. 5, 1903	1,019 10
Ingersoll " "	J. S. Smith	Aug. 31, 1903	341 92
Kingston " "	P. Walsh	" 25, 1903	274 00
" Custom House "	"	" 25, 1903	184 95
" " Painting, &c	Robinson Bros	Dec. 29, 1903	520 00
" R.M.C. Gymnasium. Apparat. & fittings	Ketchum & Co.	Feb. 18, 1904	6,185 00
" Custom House. Elect. appliances	Breck & Halliday	Dec. 28, 1903	664 00
Lindsay, Post Office. Supply of coal	McLennan & Co	Aug. 19, 1903	211 73
" " "	R. E. Clisdell	Oct. 13, 1903	
" Custom House "	"	" 13, 1903	

SESSIONAL PAPER No. 19

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.		Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS—*Continued.*				$ cts.
Ontario—Continued.				
Lindsay, Drill Hall.	Heating apparatus.	Elliott Bros	May 12, 1904	5,450 00
Napanee, Post Office.	Supply of coal	F. F. Van Luven	Aug. 27, 1903	270 00
Niagara Falls "	"	J. E. Hutchings	Sept, 14, 1903	125 37
" Customs.	Wiring and fixtures	R. F. Carter Electric Co.	March 8, 1904	121 50
Orangeville, Post Office.	Supply of coal	Jas. R. Lathwell	Oct. 2, 1903	194 75
Orillia "	"	Andrew Tait	Aug. 25, 1903	145 00
Ottawa, Exp. Farm.	"	McCullough & Co	Sept. 5, 1903	1,075 38
" Public Buildings	"	John Heney & Son	April 22, 1904	44,690 55
" Printing Bureau.	Addition for storage.	Wm. Doran & R. M. Devlin	Jan. 13, 1904	9,100 00
" Astronomical Observatory.	Heat'g appar.	Butterworth & Co.	March 3, 1904	2,749 00
" "	Structural work to dome	The Warner & Swasey Co	" 15, 1904	4,740 00
Paris, Post Office.	Supply of coal	Geo. E. Taylor	Aug. 31, 1903	120 42
Peterborough "	"	The McClellan Co	Sept. 5, 1903	180 46
Petrolia "	"	R. Jackson & Son	Oct. 1, 1903	256 75
Picton "	"	The Rathbun Co	" 5, 1903	226 00
Port Arthur "	"	Louis Walsh Coal Co	" 19, 1903	187 00
Port Hope "	"	Wright & Rosevear	Sept. 28, 1903	232 00
Prescott "	"	James Buckley	Oct. 20, 1903	234 00
" Custom House	"	"	" 20, 1903	409 50
Rat Portage, Post Office	"	Windatt & Co	Oct. 26, 1903	215 72
St. Catharines "	"	W. H. McCordick	Sept. 19, 1903	255 40
" Construction of Drill Hall		M. Sullivan & W. Langdon	June 2, 1904	79,829 00
St. Thomas, Post Office.	Supply of coal	F. H. Ferguson	Oct. 1, 1903	350 00
Sarnia "	"	Geo. Shaw	Sept. 8, 1903	420 49
" Public Building.	Granolithic walks	Wm. Ellis	July 24, 1903	527 00
" "	Grading, &c	Simpson & McDonald	" 24, 1903	300 00
Sault Ste. Marie.	Construct. of Post Office b'd'g	McPhail, McCarty & Wright	Nov. 23, 1903	54,000 00
Smith's Falls. Post Office.	Supply of coal	A. Mackenzie & Co	Aug. 27, 1903	155 25
Stratford, "	"	J. E. Hutchings	Sept. 14, 1903	229 90
Strathroy, "	"	Alex. Reed	Aug. 28, 1903	348 67
Toronto, Custom House.	"	James H. Milnes & Co.	Oct. 5, 1903	465 44
" Examining Warehouse.	"	" "	" 5, 1903	555 72
" Post Office.	"	" "	" 5, 1903	974 21
" " Station 'C.'	"	" "	" 5, 1903	
" Revenue Office.	"	" "	" 5, 1903	253 55
" Junction, Post Office & Customs.	Vaults, slate roof, &c	Joy & Needham	Aug. 4, 1903	1,524 00
" Post Office elevator		The Fensom Elevator Co., Ltd	Oct. 3, 1903	6,200 00
" " fittings		D. Carlyle	" 10, 1903	735 00
" Assistant Rec. General's Office.	New treasury safe	Toronto Safe Works	" 10, 1903	2,100 00
" Examining Warehouse.	Addition to (Express Department)	Brown & Love	May 31, 1904	38,600 00
Trenton, Post Office.	Supply of coal	J. Funnell	Aug. 31, 1903	172 50
Walkerton, "	"	S. W. Vogan	Sept. 17, 1903	254 00
Windsor, "	"	Robert J. Cleminson	Oct. 16, 1903	467 75
Wingham.	Construction of public building	S. S. Cooper	June 24, 1904	15,500 00
Woodstock, Post Office.	Supply of coal	The MacIntosh Coal Co.	Sept. 5, 1903	261 62
Manitoba.				
Brandon, Post Office.	Supply of coal	Robert Purdon	Sept. 16, 1903	892 58
" Exp. Farm.	"	"	" 16, 1903	231 20
" "	"	Windatt & Co	" 21, 1903	149 49
Portage la Prairie, Public Bldg.	Supply of coal	"	Oct. 26, 1903	449 67
Winnipeg, Post Office.	"	D. E. Adams	Aug. 31, 1903	2,137 24
" Custom House	"	Harstone Bros	" 31, 1903	904 40
" Immigt. Office and Shed	"	"	" 31, 1903	1,512 90
" " Hospital	"	"	" 31, 1903	
" Indian Office & Crown Timber Office.		"	" 31, 1903	
" Exam'g. Warehouse.	Supply of coal	"	" 31, 1903	583 62

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract	Amount.
PUBLIC BUILDINGS—*Continued.*			$ cts.
North-west Territories.			
Carnduff, Immigrant Building. Supply of coal	Fairbairn Bros.	Sept. 2, 1903	67 50
Craik. Construction of Immigrant building	Wm. Hoge & Jas. H. Thomson	Mar. 30, 1904	2,025 00
Davidson " "	" "	" 30, 1904	2,025 00
Edmonton, Dominion Land. Supply of coal	Milner & Blatchford	Sept. 2, 1903	79 50
Indian Head, Experimental Farm "	Geo. Thompson	" 3, 1903	200 00
Lethbridge, Post Office "	The Alberta Ry. Coal Co.	" 15, 1903	162 50
Macleod, Custom House "	H. A. F. Grady	" 15, 1903	
" Court House "	"	" 15, 1903	57 65
" " Heating apparatus	Martel & Langelier	Nov. 30, 1903	1,400 00
" " Fittings	Pat. Navin	Jan. 12, 1904	465 00
Moose Jaw " Supply of coal	Robert Beard	Oct. 8, 1903	232 20
Moosomin " "	Windatt & Co	Sept. 21, 1903	306 05
" " "	T. H. Bristow	" 1, 1903	151 24
Red Deer. Construction of Court House	Geo. A. Johnson & A. Tait	" 7, 1903	12,500 00
" Dominion Land Office. Supply of coal.	Joseph M. Smith	" 6, 1903	
Regina. Court House "	The Smith & Fergusom Co.	Sept. 26, 1903	37 50
" Post Office and Dominion Land Office. Supply of coal	" "	" 26, 1903	52 50 37 50
" Construction of Immigrant building	D. C. McDougall	Mar. 14, 1904	4,500 00
" Court House. Supply of coal	Whitmore Bros.	Sept. 2, 1903	797 50
Regina, Post Office. Supply of coal	Whitmore Bros.	Sept. 2, 1903	128 94
" Dominion Land Office. "	"	" 2, 1903	580 00
Wolseley, Court House. "	McGee & Thompson	" 15, 1902	282 75
Yorkton, Immigration Building. "	Wm. Simpson	" 21, 1903	336 86
" Court House. Heating apparatus	Martel & Langelier	Oct. 21, 1903	1,200 00
British Columbia.			
Kamloops. Drill Hall. Fittings	D. H. Campbell	Aug. 1, 1903	510 00
Nanaimo, Post Office & Building, addition to	Alex. Forrester	May 4, 1904	14,475 00
Nelson, Public Building. Electric light	Kootenay Elec. Supply & Construction Co	Oct. 6, 1903	1,047 00
Rossland, construction of drill shed	Wm. Geo. Gillett	June 13, 1904	17,395 00
HARBOURS AND RIVERS.			
Nova Scotia.			
Big Harbour, construction of wharf approach	Reid & Archibald	Sept. 28, 1904	3,875 00
Big Pond " "	Hugh McDonald	Jan. 12, 1904	7,720 00
Iona, extension to wharf	K. Sweet & A. W. Girroir	May 20, 1904	10,230 00
L'Ardoise, works to connect breakwater at	Hugh McDonald	Dec. 29, 1903	24,880 00
McKay's Point, Public wharf	Wm. J. Landry	April 30, 1904	5,442 00
Pembroke, Breakwater	J. E. & H. Bigelow	Mar. 28, 1904	7,970 00
Port Hawkesbury, removal of cribwork & ballast on site of wharf	A. W. Girroir	Oct. 26, 1903	2,900 00
Tenecape, Breakwater	Jno. E. & Halle Bigelow	May 17, 1904	8,370 00
Victoria Beach, Pile work pier	Reid & Archibald	June 15, 1904	93,890 00
West Bay. 'The Points.' Pile wharf	Hugh McDonald	Sept. 1, 1903	2,980 00
Prince Edward Island.			
New London. Breakwater	T. P. Cullen	May 3, 1904	5,900 00
New Brunswick.			
Cheticamp Point, construction of wharf	Reid & Archibald	July 16, 1903	13,880 00
Miscou " "	Jno. Burns & T. P. Charleson	April 27, 1904	13,700 00
Negro Point, supply of stone for breakwater	W. E Scully	Nov. 17, 1903	2,250 00
Petit Rocher, construction of breakwater	Simon McGregor	May 31, 1904	32,900 00

No. 1.—Contracts let by the Department of Public Works, &c.—*Concluded.*

Works.	Names of Contractors.	Date of Contract	Amount.
Public Buildings—*Continued.*			$ cts.
Quebec.			
Anse aux Gascons, Breakwater	Jno. Burns & T. P. Charleson	April 27, 1904	15,495 00
Bonaventure, East "	" "	" 27, 1904	15,690 00
Desjardins, Allumette Island, Wharf	Thomas Moran	Jan. 8, 1904	9,953 67
Douglastown, Pier	Jno. Heney & H. Smith	April 28, 1904	17,549 00
Escoumains, Wharf at Les	T. Bernier & G. Beaulieu	May, 7, 1904	11,478 00
Father Point, extension to wharf	Jno. Heney & H. Smith	" 27, 1904	44,300 00
Laprairie, concrete protection walls	Amiot & Lemay	Nov. 10, 1903	29,650 00
Lotbinière, roadway from shore to Isolated block	T. Bernier, & G. Beaulieu	May 7, 1904	13,400 00
Maguasha, Wharf	T. P. Charleson	June 18, 1904	7,500 00
Newport, (Gaspé) additional length to breakwater	Jno. J. Lyons & James White	Oct. 17, 1903	13,388 00
Paspebiac, Wharf	Jno. Burns & T. P. Charleson	May 31, 1904	19,695 00
Point aux Trembles, Landing pier	Dusseault & Pageau	June 28, 1904	33,775 00
Port Daniel, extension to wharf	J. J. Lyons & J. White	May 30, 1904	21,890 00
Portage du Fort, superstructure of highway bridge	The Locomotive & Mach. Co., Ltd	Aug. 25, 1903	9,750 00
Quebec, harbour improvements, extension of 500 feet	Dusseault & Lemieux	May 25, 1904	239,942 87
St. Charles de Caplan, Breakwater	J. Burns & T. P. Charleson	" 31, 1904	13,700 00
Ste. Famille, (Island of Orleans) addition to wharf	P. T. C. Dumais & V. Giroux	" 28, 1904	17,664 00
St. Godfroi, Breakwater	J. Burns & T. P. Charleson	" 31, 1904	19,300 00
Three Rivers, work to ice-breakers	Randolph McDonald	Aug. 1, 1903	5,400 00
Touladie, building of dams at	Fraser & Son	Sept. 16, 1903	2,500 00
Ontario.			
Cumberland, Wharf	John D. Warwick	May 31, 1904	6,275 00
Grand Bend, Wharf and road approach	" "	March 26, 1904	21,388 00
Honora Bay, Manitoulin Island, Wharf	G. Kastner & D. Potter	Feb. 22, 1904	7,900 00
Midland, Pile wharf	A. A. McDonald	Nov. 2, 1903	19,492 00
Pembroke "	The W. J. Poupore Co., Ltd	Feb. 19, 1904	41,999 00
Port Colborne, timber & concrete cribwork to breakwater	M. J. Hogan	June 8, 1904	179,000 00
Port Colborne, several works to breakwater	"	April 13, 1904	Sch. of rates.
" " "	"	March 8, 1904	39,000 00
Sault Ste. Marie, extension to Govt. wharf	Jas. Battle	April 12, 1904	65,000 00
Vessels, Dredges and Plant.			
Construction of condensing outfit and triple expansion engine for pump dredge *W. S. Fielding*	The Polson Iron Works	Sept. 30, 1903	14,915 00
Construction of two boilers for dredge *Joseph Israel Tarte*	John Inglis Co., Ltd	Jan. 9, 1904	18,400 00
" " "	The Bertram Engine Works Co	" 9, 1904	18,400 00
Construction of a square fire box tug boiler for tug *Sir Hector*	The Polson Iron Works	March 31, 1904	3,440 00
Supply of electric current for operation of machines, &c., Govt. shipyard at Sorel, P.Q.	The Sorel Electric Co.	April 28, 1904	9,000 00
Construction of boiler for dredge *St. Louis*	P. J. Powers & Co	June 8, 1904	675 00
Telegraphs.			
Isle aux Coudres, P.Q., maintenance of telephone line	Hector Lemieux	July 16, 1903	150 00
Supply of 2,280 poles for telegraph line between Bersimis & Godbout, P.Q.	Jos. & Nérée Tremblay	Dec. 23, 1903	per pole 1 90

No. 2.—STATEMENT of properties purchased or sold by the Department of Public Works during the Fiscal Year ended June 30, 1904.

Date of Conveyance.	Vendors	Purchasers.	Description of Property.	For what Purpose.	Area.	Price.
1903.						$ cts.
July 15	D. A. Macdonald	His Majesty	Part of lot No. 17 N.E. corner of Main and St. Catherine sts., Alexandria, Ont.	Site—Public building.		3,500 00
" 15	Helen Fryer	"	Portion of lots 13, 14, 15, 16, Selkirk, Man		$\frac{0.273}{1.00.00}$ of acre.	
Aug. 3	His Majesty	The Locomotive and Machine Co., Montreal, Ltd.	Sale of old iron, old Chaudiere Bridge			1 00
						p. ton, 12 00
" 19	Elz. Paquet	His Majesty	Part of lot Nos. 112 and 110, St. Nicholas, P.Q.	Approach to wharf.		250 00
Sept. 1	Kate McNeil & al.	"	Lot between Main Post Road and shore, East Bay, Big Pond, N.S.	Approach to wharf	9,120 sq. ft.	15 00
" 9	Wm. Snow & al	"	Land, Black Cove, Ecum Secum, N.S.	Wharf	$\frac{1}{10}$ of acre	2 00
" 10	Manly Pye & al.	"	" "	"	$\frac{1}{7}$ of acre	8 00
" 29	John Grice & al.	"	Lots 1, 2, Block 8, Clayoqust, B.C.	For telegraph station		1 00
Oct. 6	B. H. Kirkpatrick	"	Part of section 7, Renfrew Dist., B.C.	" "	1 acre	425 00
" 9	X. Lemelin	"	Lot No. 195, St. Francois, Island of Orleans, P.Q.	Approach to wharf	39,662 sq. ft.	125 00
" 9	N. Lepage	"	Lot No. 196 " "	" "	19,500 sq. ft.	62 50
" 9	S. Emond	"	Lot No. 197 " "	" "	20,570 sq. ft.	62 50
" 28	M. Connolly	"	Dredging plant, *International*.			125,000 00
Nov. 13	Municipality, Anse aux Gascons	"	Lot No. 435, 1st Range, L'Anse aux Gascons, P.Q.	Wharf	3,000 sq. ft.	1 00
" 21	Municipality of Port Daniel	"	Lot No. 190, Port Daniel East, P.Q.	Wharf	$\frac{1}{2}$ of acre	1 00
" 21	Annie Spence	"	Township lot 17, Concession 'A,' town lot No. 8, Block 'C,' Cobourg, Ont.	Armoury		2,000 00
" 21	Francois Skene	"	Land at Shegawake, P.Q.	Wharf and approach	5,000 sq. ft.	1 00
" 23	S. LeBrasseur	"	Part of lot No. 25, St. Godefroi, P.Q.	Wharf	7,500 sq. ft.	1 00
Dec. 7	John Wofer	"	Sale of land, Maguasha, P.Q.	Road to wharf	25 x 100 ft	1 00
" 7	Municipality of Nouvelle	"	Land at Maguasha, P.Q.	Site for wharf	25 x 100 ft	1 00
" 9	Sam. N. Miller & ux.	"	Land at Middleton, N.S.	Armoury	$\frac{8.5}{1.00}$ of acre	550 00
" 9	John McLeod & ux.	"	Strip of land, North Bay, Ingonish, N.S.	Approach and right of way	21,620 sq. ft.	100 00
" 21	Arthur Garrett	"	Land at St. Bonaventure East, P.Q.	Wharf	5,000 sq. ft.	1 00
" 22	J. A. Campbell	"	Land at New Richmond, P.Q.	Approach to wharf	5,000 sq. ft.	1 00
" 22	"	"	Part of lot 55, New Richmond, P.Q.	Wharf and approach	5,000 sq. ft.	1 00
" 23	Archd. Stewart & al.	"	Lands, Township of Nepean, Appin Place, Ottawa	Public building.	400 acres	75,000 00
" 24	Shieves Lumber Co., Ltd.	"	Land at Campbellton, N.B.	Approach	2,795 ft.	1,000 00

"	25	Mary Finnigan and husband	"	Town lot No. 3, Oshawa, Ont.	Public building		2,900 00
"	28	J. & N. Denis	"	Part of lot No. 306, Paspebiac, P.Q.	Wharf	2,400 sq. ft	5 00
"	29	M. Douglas	"	Part of lot No. 67, C. Woodstock, Ont	Public building		1,100 00
"	39	F. Brière	"	Part of lot 53, St. Charles de Caplan, P.Q.	Wharf	5,000 sq. ft	1 00
1904.							
Jan.	2	His Majesty	Adelard M. Gauthier	Strip of lands, Three Rivers, P.Q.	Private enterprise	144 x 9 ft.	Free grant.
"	29	M. H. Dubois	His Majesty	Lots Nos. 278, 279, 280 and 281, Acton Vale	Public building		2,500 00
"	29	Thos. Gregory & ux	"	Lots Nos. 18, 19, Wingham, Ont	" "	$\frac{44}{100}$ of acre	5,000 00
"	30	His Majesty	Thos. Lawson	Sale of boilers, Ottawa.	Private enterprise		1,275 00
Feb.	8	Philippe Fraser & ux	His Majesty	Land, Port Bévis, Big Harbour, N.S	Wharf	1,676 sq. ft.	1 00
"	13	Vincent McLean & ux	"	Land at McKay's Point, N.S.	"	20,120 sq. ft.	50 00
"	15	His Majesty	Dr. J. D. Maher	Land at Portland, N.B.	Private enterprise		5,801 00
"	15	C. H. Hall & ux	His Majesty	Land at East River, N.S.	Wharf	$\frac{32}{100}$ of an acre	300 00
"	18	N. Shore Power Ry. & Navigation Co	"	Sale of lands at Seven Islands, P.Q.	Government enterprise		1 00
"	20	Athanase Delisle	"	Lot No. 87*a*, Pointe aux Trembles, P.Q.	Approach to wharf		300 00
Feb.	23	M. G. Hardy	His Majesty	Water lot, Grondines, P.Q.	Wharf	10·78 x 120 ft.	2,000 00
"	24	Peter Devine & al	"	Land at Musquash, N.B., (Dipper Harbour)	Right of way	$\frac{38}{100}$ of an acre	150 00
Mch.	1	His Majesty	Hamilton Bridge Works Co., ltd.	Lands and premises, part of Lot 16, 1st and 2nd Concession, Hamilton, Ont.	Private enterprise		1,500 00
"	7	Robert G. Barrett	His Majesty	Lot No. 6, Bridgeburg, Ont.	Public building		770 00
"	9	Enos Baker	"	Land, Baker's Point, East Jeddore, N.S	Site for wharf	$\frac{25}{100}$ of an acre	1 00
"	22	John McDonald	"	Land, Point Prim, N.S.	" "		350 00
"	28	J. McInnes	"	Land, Breton Cove, N.S., and right of way.	" "	3,600 sq. ft.	120 00
"	29	L. H. Desjardins	"	Lot No. 228, Terrebonne, P.Q.	Public building	65 ft. wide by depth of lot	1,500 00
"	30	Robert E. Finn	"	Lands, Chezzetcook East, N.S.	Public wharf	$1\frac{93}{5}$ rods	50 00
April	2	His Majesty	Corporation of Acton, P.Q.	Lands at Acton, P.Q.	Public building		600 00
"	2	La Compagniedes bateaux a vapeur de Deschambault & Lotbinière.	His Majesty	Sale of wharf at Deschambault, P.Q.	Public wharf		500 00
"	5	Conrad Denean	"	Bill of sale of tug *Carmelia*	Government purposes.		13,000 00
"	7	Frs. Viau de St. Mars	"	Land Lot No. 43, Longueuil, P.Q.	Public building	118 x 85 ft.	2,800 00
"	8	A. Chevalier	"	Lands at St. Louis du Mile End, P.Q.	" "		5,400 00
"	18	Peter Dixon & ux	"	Land, North Head, Grand Manan, N.B.	Wharf		1 00
"	18	Alex. Lumsden	"	Bill of sale, steam screw *Dora*.	Government purposes.		3,000 00
"	18	Alex. McIntosh	"	Land at Pleasant Bay, N.S	" "	1,050 ft	1 00
"	19	H. S. Creighton & al	"	Lots Nos. 26, 27, 28, 29, 30, 31, Halifax, N.S.	Detention hospital	36,000 ft.	900 00
"	22	Dr. C. E. Graham	"	Lots 1a. 2a, 2b, 5th Range, Hull, P.Q.	Government purposes.		2,800 00
"	25	H. Paxton Baird	"	Land, Woodstock, N.B	Armoury	100 x 160 ft.	6,000 00
"	27	Municipality St. Pierre de la Malbaie	"	Land, St. Pierre de la Malbaie, P.Q.	R'dw'y to Gov. b'kw'tr	25 x 26.	Free grant.
"	29	Geo. E. Beauchemin	"	Bill of sale, tug *Nile*	Government purposes.		2,500 00
May	6	Alex. McKay	"	Land at Sydney Mines, N.S	Public building	9,165 sq. ft.	1,500 00

No. 2.—STATEMNET of properties purchased or sold by the Department of Public Works, &c.—*Continued.*

Date of Conveyance.	Vendors.	Purchasers.	Description of Property.	For what Purpose.	Area.	Price.
1904.						$ cts.
May 19	Elz. Savard	His Majesty	Park Savard, shore of River St. Charles, Quebec	Government purposes		14,000 00
" 27	Corporation of Guelph	"	Land, City of Guelph, Ont	Armoury		5,000 00
June 4	Ernest Murré	"	Land, St. Gédéon les Isles, P.Q.	Appr. to wharf		1 00
" 4	Wm. Gaudrault	"	" " "	"		1 00
" 10	Arch. McKenzie	"	Land, Campbellton, N.B.	For public building		4,000 00
" 11	Grand Valley Co., ltd.	"	Strip of land East Point, Grand Vallée, P.Q.	Wharf and right of way	48,000 sq. ft.	1 00
June 21	John N. Lester	"	Land at Burford, Ont	Armoury	90 x 150 ft.	250 00
" 23	The North Shore Power R'y & Navigation Co	"	Works and lands at Seven Islands, P.Q.	Government purposes		55,919 00
" 24	Shives Lumber Co., ltd	"	Land at Campbellton, N.B.	Ferry land	7,282 sq. ft.	2,000 00

No. 3.—Statement of Properties Leased to and by the Department of Public Works during the Fiscal Year ended June 30, 1904.

Date of Lease.	Lessors.	Lessees.	Property Leased.	For what purpose.	Duration of Lease.	Annual Rental.
1903.						
July 1	G. W. Pacaud	His Majesty	Store, St. Catherine St., Montreal	Post office purposes	5 years	$ 2,200 per annum.
Aug. 24	His Majesty	T. Malone & Burrill	Land, part of lots 407, 408, Cap de la Magdelaine, Q.	Mill purposes	10 "	50 "
Sept. 26	A. L. Pacaud	His Majesty	Ground floor bldg., St. Catherine St., Montreal.	Post office purposes	5 "	2,200 "
" 30	The Ottawa Investment Co., Ltd.	"	Stone bldg., s.-w. corner Metcalfe and Queen Sts., Ottawa, Ont.	Governm'nt purposes	1 "	1,000 "
Oct. 17	Jas. W. Woods	"	Stone bldg., Slater St., Ottawa, Ont	Militia Department		11,040 "
Nov. 2	His Majesty	Frontenac Cereal Co., Ltd.	Land—Dry dock, Kingston, Ont.	Private enterprise	21 years	250 "
Dec. 22	His Majesty	Upper Ottawa Improvement Co.	Portion of Govt. reserve, Victoria Island, Ottawa, Ont.	"	10 "	2 "
1904.						
Feb. 20	D. Wood	His Majesty	Upper floor of warehouse, Teulon, Man.	Immigrat'n purposes	8 months	15 per month.
Mar. 14	R. Karnagel	"	Building, Didsbury, N.W.T.	"	6 "	12 "
" 22	C. T. Daykin	"	Building, Lacombe, N.W.T	"	9 "	13 "
April 1	E. A. Bush	"	Upper floor bldg., Leduc, N.W.T.	"	8 "	10 "
" 15	Jas. W. Woods	"	Building on Queen St., Ottawa	Railway Commission	5 years	5,300 per annum.
June 10	Municipality of Ste. Cunégonde.	"	Ground floor of Municipal Bldg., Ste. Cunégonde, Montreal, Q.	Post office	21 "	1,750 "

Department of Public Works,
Ottawa, December 10, 1904.

J. A. CHASSÉ,
Law Clerk.

LIST

OF SOME OF THE

ACTS OF PARLIAMENT

PASSED AT THE SESSION OF 1904

HAVING REFERENCE TO THE

DEPARTMENT OF PUBLIC WORKS OR WORKS UNDER ITS CHARGE

List of some of the Public Acts of the Parliament of Canada, passed at the Fourth Session of the Ninth Parliament, closed by Prorogation on August 10, 1904, and having reference to the Public Works Department or works under its charge (4 Edward VII).

Subject.	Full Title of the Statute.	Chapter.	Page in Statute Book.
Sums granted to His Majesty for the financial years ending June 30, 1904, and June 30, 1905, and the purposes for which they are granted.	An Act for granting to His Majesty certain sums of money for the public service of the financial years ending respectively June 30, 1904, and June 30, 1905.....	2	37
Respecting tolls to be levied by Company.	An Act to incorporate the Thompson River Improvement Company.....	130	261

N.B.—By Proclamation dated March 12, 1904, the Culbute Canal on the Ottawa River and locks, dams and other works associated therewith were declared to be abandoned as public works of Canada.

Vide Canada Gazette, Vol. XXXVII. p. 2115.

J. A. CHASSÉ,
Law Clerk.

Department of Public Works,
Ottawa, December 10, 1904.

NATIONAL ART GALLERY

CURATOR'S REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 1904.

NATIONAL ART GALLERY.

OTTAWA, November 24, 1904.

FRED. GÉLINAS, Esq.,
Secretary, Department of Public Works,
Ottawa.

SIR,—I have the honour to report that the following pictures have been purchased by the government from A. Suzor Coté, Esq., for the National Art Gallery of Canada, during the fiscal year ended June, 1904:—

'Retour des Champs.'

'Maree Montante.'

'Scene d'Automne (soir).'

for the sum of twelve hundred dollars ($1,200), one hundred and fifty dollars (150) and one hundred and twenty-five dollars ($125), respectively.

During the year, fourteen thousand nine hundred and sixty-six (14,966) visitors registered.

I have the honour to be, sir,

Your obedient servant,

L. FENNINGS TAYLOR,
Curator, National Art Gallery.

NAMES OF THE CHIEF OFFICERS

OF THE

DEPARTMENT OF PUBLIC WORKS

WITH

DATES OF APPOINTMENT, ETC., FROM 1841 TO 1904

NAMES OF THE CHIEF OFFICERS.

The names with the dates of the appointment, &c., of the principal Officials of the Department of Public Works, from 1841 to 1904.

Names.	Capacity or Office.	Date of Appointment. Served From	To
Under Statute 4-5 Vic., Cap. 38.			
CORPORATION BOARD OF WORKS.			
Killaly, Hon. H. H	Chairman		
Daly, Hon. D.	Members	Dec. 29, 1841	Oct. 3, 1844
Harrison, S. B.			
Sullivan, R. B.			
Davidson, J., Esq.			
Begly, Thomas A	Secretary	Aug. 17, 1841	
Keefer, Samuel	Chief Engineer	" 17, 1841	
Rubidge, F. B.	Architect and Assistant Chief Engineer	Dec. 15, 1841	
NEW BOARD OF WORKS.			
Killaly, Hon. H. H	Chairman		
Daly, Hon. D	Members	Oct. 4, 1844	June 8, 1846
Draper, Hon. W. H.			
Morris, Hon. W.			
Papineau, Hon. D. B.			
Under Statute 9th Vic., Cap. 37, &c.			
Robinson, Hon. W. B	Chief Commissioner	June 22, 1846	March 10, 1848
Taché, Hon. E. P.	"	March 11, 1848	Nov. 26, 1849
Chabot, Hon. J.	"	Dec. 13, 1849	March 31, 1850
Merritt, Hon. W. H.	"	April 8, 1850	Feb. 11, 1851
Bourret, Hon. J.	"	Feb. 12, 1851	Oct. 27, 1851
Young, Hon. John	"	Oct. 28, 1851	Sept. 22, 1852
Chabot, Hon. J.	"	Sept. 23, 1852	Jan. 26, 1855
Lemieux, Hon. F.	"	Jan. 27, 1855	Nov. 25, 1857
Alleyn, Hon. C.	"	Nov. 26, 1857	Aug. 1, 1858
Holton, Hon. L. H.	"	Aug. 2, 1858	" 6, 1858
Sicotte, Hon. L. V.	"	" 7, 1858	Jan. 10, 1859
Rose, Hon. John	"	Jan. 11, 1859	June 12, 1861
Cauchon, Hon. Jos.	Commissioner	June 13, 1861	May 23, 1862
Tessier, Hon. U. J.	"	May 24, 1862	" 27, 1863
Drummond, Hon. L. T.	"	" 28, 1863	July 23, 1863
Laframboise, Hon. M.	"	July 24, 1863	March 29, 1864
Chapais, J. C.	"	March 30, 1864	June 30, 1867
Casgrain, Hon. Chas. Eus.	Second Commissioner	July 9, 1846	Feb. 29, 1848
Cameron, Hon. M.	Assistant Commissioner	March 11, 1848	" 1, 1850
Wettenhall, James, Esq.	"	Feb. 2, 1850	April 16, 1850
Bourret, Hon. Jos.	"	April 17, 1850	Feb. 11, 1851
Killaly, Hon. H. H.	"	Feb. 12, 1851	May 6, 1859
Keefer, Samuel	Deputy Commissioner	May 6, 1859	March 7, 1864
Trudeau, Toussaint	"	March 8, 1864	May 29, 1868
Begley, Thos. A.	Secretary	Feb. 10, 1841	Oct. 31, 1858
Trudeau, Toussaint	"	Dec. 13, 1859	March 7, 1864
Braun, Frederick	"	March 8, 1864	July 1, 1867
Page, John	Chief Engineer	Oct. 31, 1873	Oct. 1, 1879

The names with the dates of the appointment, &c., of the principal Officials of the Department of Public Works, from 1841 to 1904—*Concluded.*

Names.	Capacity or Office.	Date of Appointment. Served From	To
Under Statute 31 Vic., Chap. 12.			
McDougall, Hon. Wm	Minister	July 1, 1867	Dec. 7, 1869
Langevin, C.B., Hon. Hector L	"	Dec. 8, 1869	Nov. 6, 1873
Mackenzie, Hon. Alexander	"	Nov. 7, 1873	Oct. 16, 1878
Tupper, C.B., K.C.M.G., Sir Charles	"	Oct. 17, 1878	May 19, 1879
Langevin, C.B., K.C.M.G., Sir Hector L.	"	May 20, 1879	Aug. 11, 1891
Smith, Hon. Frank	Acting Minister	Aug. 14, 1891	Jan. 10, 1892
Ouimet, Hon. Joseph Aldric	Minister	Jan. 11, 1892	April 30, 1896
Desjardins, Hon. Alphonse	"	May 1, 1896	July 12, 1896
Tarte, Hon. J. Israël	"	July 13, 1896	Oct. 21, 1902
Sutherland, Hon. James	"	Nov. 11, 1902	
Trudeau, Toussaint	Deputy Minister	May 29, 1868	Oct. 1, 1879
Baillairgé, G. F	"	Oct. 4, 1879	Dec. 31, 1890
Gobeil, A	"	Jan. 1, 1891	
Braun, Frederick	Secretary	July 1, 1867	Sept. 30, 1879
Chapleau, S	"	Oct. 1, 1879	Nov. 4, 1880
Ennis, F. H	"	Nov 5, 1880	Jan. 13, 1885
Gobeil, A., I. S. O	"	Jan. 23, 1885	Dec. 31, 1890
Roy, E. F. E	"	" 1, 1891	" 31, 1900
Gelinas, Fred	"	June 8, 1901	
McPherson, D. A	Assistant Secretaty	Jan. 18, 1891	April 11, 1893
Desrochers, Rodolphe Charles	"	" 8, 1896	
Page, John	Chief Engineer	July 1, 1868	Oct. 1, 1879
Perley, H. F	"	Nov. 25, 1880	July 10, 1891
Coste, Louis	"	July 26, 1892	March 18, 1899
Lafleur, E. D	Acting Chief Engineer	March 18, 1899	
Scott, Thos. S	Chief Architect.	May 26, 1871	Oct. 30, 1881
Fuller, Thomas	"	Oct. 31, 1881	June 30, 1897
Ewart, David, I.S.O	"	Nov. 2, 1897	

NAMES

OF THE

OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS OF CANADA

ON JUNE 30, 1904

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS.

STATEMENT showing the Names, Dates of Appointment, Salaries, &c., of persons employed on the various Slides and Booms, on June 30, 1904.

Name.	Date of Birth.	Position.	Where employed.	Date of Appointment.	Salary.	Remarks.
Collector of Slide and Boom Dues.					$ cts.	
E. T. Smith	Nov. 26, 1846.	Collector	Ottawa	July 1, 1889.	1,800 00 a year	Date of first appointment to Crown timber office, Ottawa, June 23, 1864. Clerk in Dept. of Inland Rev., July 1, 1870, to June 30, 1889. Transferred to civil list, with rank of first class clerk, January 5, 1892.
F. X. Gagné	Sept. 23, 1859.	Clerk	"	Dec. 16, 1897.	1,003 75 "	Entered the service Aug. 13, 1889.
James Steen	June 17, 1830.	Boatman	"	July 12, 1889.	60 00 a month.	Employed during the season of navigation for 8 months each year. Date of first appointment, May 26, 1861. Timber counter, Ottawa, for Dept. of Inland Revenue, Jan. 7, 1884, to June 30, 1889.
J. Brassard		"	"	March 1, 1901.	60 00 "	Employed during the season of navigation, for 8 months each year.
Saguenay District						Saguenay district slides abandoned by authority of O.C., dated Feb. 5, 1896 (No. 168,740).
St. Maurice District.						
L. P. Dallaire		Paymaster	Three Rivers	May 1, 1898.	66 66 a month	
P. Juneau		Boom master	Grand'Mère	May 1, 1902.	50 00 "	
Jos. Pagé	July 7, 1845.	"	M'th of St. Maurice	Dec. 10, 1879.	75 00 "	
Jos. Dick		Asst. boom master	Three Rivers	May 19, 1898.	75 00 "	
Gédéon Rousseau		Boom master	Shawenigan Falls	April 7, 1896.	75 00 "	
Moïse Masson		"	Grandes Piles	May 19, 1898.	75 00 "	
N. Lymburner	July 22, 1855.	"	Shawenigan Falls	July 1, 1895	75 00 "	
A. Paquin		"	Ste. Flore	Dec. 1, 1901.	75 00 "	
Ottawa District.						
G. P. Brophy	Feb. 24, 1846.	Superintendent	Ottawa	July 6, 1873.	2,500 00 a year	*Ottawa River Works*—In addition to the above officers, &c., there are employed
D. Scott	" 15, 1830.	Accountant	"	Oct. 1, 1854.	1,500 00 "	

J. C. Scott	June 27, 1865	Measurer	Ottawa	April 1, 1889	3 50 a day	during the running season, one foreman on slide at $1.50 and one assistant foreman at $1.25 a day; also 25 to 30 labourers at $1 to $1.40 a working day
J. Kent	Jan. 28, 1864	Clerk	"	Aug. 1, 1886	3 25 "	
Wm. Cam	April 22, 1860	Messenger	"	Jan. 1, 1892	1 35 "	
Pierre St. Pierre		Deputy slide master.	Carillon	June 1, 1897	1 40 "	Actively employed about 7 months. Oversees repairs in winter.
D. Noonan	June 17, 1840	Boom master	Gatineau	Mar. 21, 1878	500 00 a year	" "
J. Soulière	Nov. 8, 1829	Deputy slide master.	Chandière	1878	2 50 a day	" "
P. D. Chéné		"	Hull	June 14, 1899	1 50 "	Employed about 6 months.
W. A. Shireff		"	Chats	April 26, 1898	1 50 "	Oversees repairs in winter.
John Harvey	May 22, 1831	Slide master	Arnprior	July 12, 1882	2 50 "	Actively employed about 7 months.
Joseph McCrea	Mar. 26, 1869	Boom master	Springtown	May 15, 1880	200 00 a year	Employed about 3 months during season of navigation.
Patrick Barry	" 27, 1858	Slide master	High Falls	Mar. 10, 1888	1 50 a day	Employed 5 months during season of navigation. Oversees repairs in winter.
Duncan McLaren	Jan. 7, 1860	Deputy slide master.	Portage du Fort	Sept. 7, 1881	456 25 a year	" " "
D. Rochon		"	Black River	Mar. 1, 1900	480 00 "	" " "
Wm. Selkirk		"	Lower Petawawa	Jan. 19, 1900	2 00 a day	" " "
P. O'Connor		"	Upper Petawawa	Mar. 18, 1898	2 00 "	
Wm. Thompson	May 3, 1843	"	Mountain	Oct. 10, 1879	1 25 "	" 6 mos. " "
S. Moorhead		"	Calumet	Mar. 1, 1901	1 25 "	" 6 to 7 mos. " "
John Mullin		"	Coulonge	April 10, 1890	1 50 "	" 4 mos. " "
H. R. Downey	May 16, 1846	"	Des Joachims	July 1, 1889	300 00 "	" " " "
J. F. McGuire		"	Dumoine	May 1, 1897	2 00 a day	Employed 3 months during season of navigation. Will inspect works when required
J. J. French		"	Crooked Chute	1888	2 00 "	" " "
A. H. Johnson	Nov. 28, 1839	"	Chenaux	1865	2 50 "	Paid during season of navigation, 7 mos.
Newcastle District.						
S. Clegg		Superintendent	Peterborough	Mar. 1, 1901	800 00 a year	
G. H. Giroux		Clerk, Supt's office	"	" 1, 1880	400 00 "	Receives $500 a year from Department of Railways and Canals.
W. T. Junkin		Slide master	Fenelon Fall	Nov. 15, 1896	100 00 "	$250 a year as lock-master, Dept. R. & C.
R. T. Hill		"	Buckhorn	July 1, 1891	100 00 "	Receives $150 a year from Department of Railways and Canals.
Hamilton Johnston		"	Heeley's Falls	" 15, 1892	200 00 "	
John Dinwoodie		"	Lakefield	June 20, 1893	150 00 "	Receives $240 a year from Department of Railways and Canals.
Richelieu District.						
C. Choquette		Boom master	Beloeil Station	July 26, 1897	100 00 "	
Burlington Channel Swing Bridge.						
Wm. Omand		Bridge attendant	Burlington	Sept. 19, 1896	600 00 a year	
W. Hopkins		" assistant	"	July 1, 1902	1 50 a day	Employed 9 months.
H. Lampman		" "	"	Sept. 8, 1902	1 50 "	"
Jas. Eustice		" "	"	" 19, 1896	1 50 "	"

STATEMENT showing Names, &c., of persons employed on various works—*Concluded.*

Name.	Date of Birth.	Position.	Where employed.	Date of Appointment.	Salary.	Remarks.
Yamaska Lock.					$ cts.	
O. Mineau		Lock keeper	Yamaska	Sept. 1, 1885	75 00 a month	"
H. Lambert		"	"	July 1, 1897	40 00 "	"
Rivière du Lièvre Lock.						
Hugh R. Gorman		Lock master	Rivière du Lièvre	April 15, 1897	180 00 a year	
Charles Brazeau		Labourer	"	Mar. 3, 1902	35 00 a month	Employed 8 months.
Riviere St. Louis Feeder.						
Julien Monpetit		Gate keeper	Rivière St. Louis	May 11, 1903	10 00 "	

JOS. VINCENT.

NAMES

OF

PERSONS EMPLOYED ON THE VARIOUS GRAVING DOCKS

ON JUNE 30, 1904.

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

GRAVING DOCK EMPLOYEES.

STATEMENT showing the Names, Dates of Appointment, Salaries, &c., of persons employed on the various Graving Docks, June 30, 1904.

Name.	Position.	Where Employed.	Date of Appointment.	Salary.	Remarks.
Esquimalt Graving Dock, British Columbia.				$ cts.	
John Devereux	Dockmaster	Esquimalt	Sept. 17, 1887	166 66 a month	
John Jeffcott	Engineer	"	Jan. 4, 1901	100 00 "	
F. N. Jones	Assistant engineer	"	" 8, 1901	80 00 "	
A. D. Grieves	Carpenter	"	Dec. 1, 1887	80 00 "	
W. Young	Labourer	"		50 00 "	
J. Stock	"	"	July 1, 1894	50 00 "	
Chas Jordan	Stoker	"		60 00 "	
G. Springer	"	"		60 00 "	
T. Young	Night watchman	"		50 00 "	
Lévis Graving Dock.					
Alf. Samson	Dockmaster	Lévis	Feb. 15, 1900	1,300 00 a year	
W. Macdougal	Mechanical engineer	"	June 1, 1888	75 00 a month	
T. Després	Asst. mechanical engineer	"	July 21, 1901	60 00 "	
Narcisse Lemelin	Fireman	"	June 1, 1888	40 00 "	
Kingston Graving Dock.					
F. S. Rees	Dockmaster	Kingston	April 1, 1897	1,000 00 a year	
Robert McLeod	1st engineer	"	July 1, 1892	75 00 a month	
Wm. Geoghegan	Fireman	"	" 1, 1892	45 00 "	
C. Staley	Watchman	"	" 1, 1892	45 00 "	

JOS. VINCENT.

LIST

OF

ENGINEERS, ENGINEMEN, FIREMEN, AND CARETAKERS

EMPLOYED IN THE

PUBLIC BUILDINGS THROUGHOUT THE DOMINION ON JUNE 30, 1904

DATES OF APPOINTMENT, SALARIES, ETC.

ENGINEERS AND CARETAKERS, PUBLIC BUILDINGS.

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on June 30, 1904.

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary.	Time employed each Year.	Yearly Salary.
						$		$
Amherst.....N.S.	Post office	J. H. Chapman	Jan. 1, 1846	Caretaker	Sept. 1, 1900	33 33	12 months	400 00
Antigonish..... "	Public building	Angus McDonald	Mar. , 1820	"	Feb. 5, 1891	33 33	12 "	400 00
Annapolis..... "	Post office and custom house	John McKay	Oct. 26, 1847	"	April 1, 1891	33 33	12 "	400 00
Arichat..... "	Public building	A. DeRoch		"	Nov. 13, 1903	12 50	12 "	150 00
Baddeck..... "	"	D. F. McKenzie	May 20, 1848	"	Jan. 21, 1899	20 83	12 "	250 00
Dartmouth..... "	"	J. C. Henley	Dec. 11, 1846	"	May 22, 1894	20 83	12 "	250 00
Digby..... "	"	F. Dennison	Nov. 3, 1841	"	Mar. 14, 1902	33 33	12 "	400 00
Halifax..... "	Dominion building	Richard Power	Aug. 15, 1834	Engineer	Oct. 1, 1871	62 50	12 "	750 00
" "	"	John Powell	" 21, 1836	Fireman	" 1, 1871	50 00	8 "	400 00
" "	"	J. F. Sullivan	April 16, 1866	Caretaker	July 1, 1892	33 33	12 "	400 00
" "	"	W. H. Gray	Nov. 26, 1848	Watchman	Sept. 10, 1891	39 00	12 "	468 00
" "	Drill hall	John Crowell	Feb. 26, 1852	Engineer	Dec. 13, 1901	50 00	8 "	400 00
" "	"	R. Harmon	Dec. 23, 1868	Caretaker	" 3, 1898	50 00	12 "	600 00
" "	Armouries	R. Morrison	Mar. 26, 1857	Fireman	Mar. 4, 1903	50 00	8 "	400 00
" "	Examining warehouse	M. O'Neil	Dec. 30, 1850	Caretaker	Oct. 1, 1897	37 50	12 "	450 00
" "	Immigrant building	John Oxley	April 17, 1856	Fireman	Feb. 2, 1897	50 00	12 "	600 00
Kentville..... "	Public building	W. Hiltz	" 4, 1864	Caretaker	Nov. 14, 1900	33 33	12 "	400 00
Liverpool..... "	"	James Clements	June 5, 1835	"	June 27, 1900	33 33	12 "	400 00
Lunenburg..... "	"	J. E. Hebb	Nov. 3, 1833	"	" 7, 1895	25 00	12 "	300 00
New Glasgow..... "	Post office	J. A. Mutch	Dec. 13, 1840	"	Oct. 3, 1901	33 33	12 "	400 00
North Sydney..... "	Public building	Alex. Green	July 16, 1825	"	" 1, 1897	33 33	12 "	400 00
Pictou..... "	Post office and custom house	Jas. Arbuckle	Feb. 18, 1836	"	Dec. 20, 1896	41 66	12 "	500 00
Springhill..... "	Post office	J. A. Watt	Sept. 5, 1849	"	" 1, 1903	33 33	12 "	400 00
Sydney South..... "	Post office and custom house	Mrs. M. Keefe			Jan. 13, 1904	33 33	12 "	400 00
Truro..... "	" "	Alex. P. Smith	Mar. 17, 1837	"	April 1, 1897	33 33	12 "	400 00
Windsor..... "	Post office	J. A. Mosher	Nov. 16, 1841	"	Feb. 13, 1899	33 33	12 "	400 00
Yarmouth..... "	Public building	W. H. Whallen	Dec. 23, 1841	"	Mar. 1, 1900	33 33	12 "	400 00
Charlottetown.....P.E.I.	Dominion building	Wm. J. Fraser	Jan. 1, 1836	" & engineer	April 3, 1894	33 33	12 "	400 00
" "	"	Geo. Walker	Aug. 28, 1826	Messenger	Jan. 19, 1875	41 67	12 "	500 00
" "	"	M. A. Allan	" 1, 1855	"	" 24, 1898	41 67	12 "	500 00
" "	"	Angus McKenzie	Mar. 12, 1856	Watchman	Nov. 1, 1896	45 00	12 "	540 00
Montague..... "	Public building	M. Peardon		Caretaker	May 1, 1904	13 33	12 "	160 00
Summerside..... "	Dominion building	A. MacSween	Sept. 25, 1835	"	Sept. 1, 1897	33 33	12 "	400 00
Bathurst.....N.B.	Post office	S. P. Achey	Aug. 18, 1873	"	Jan. 1, 1903	33 33	12 "	400 00

Chatham	"	"	C. Johnston	May	18, 1856	"	Mar.	27, 1895	25 00	12	"	300 00
Carleton, St. John, N.B.		Post office	James R. Reid	Aug.	15, 1823	Caretaker	Oct.	1, 1889	8 33	12	months	100 00
Dalhousie	"	"	Wm. Gould	Jan.	1, 1853	"	Nov.	26, 1890	33 33	12	"	400 00
Fredericton	"	"	L. Yerxa	Dec.	18, 1843	"	July	1, 1900	33 33	12	"	400 00
Marysville	"	"	G. W. Foster			"	Dec.	23, 1903	12 50	12	"	150 00
Moncton	"	"	E. B. Hicks	Jan.	11, 1832	"	Jan.	11, 1886	33 33	12	"	100 00
Newcastle	"	"	Patrick Keating	Mar.	13, 1840	"	Oct.	23, 1886	33 33	12	"	400 00
Richibucto	"	"	J. Murray			"	Feb.	1, 1901	25 00	12	"	300 00
St. John	"	Custom house	Neil J. Morrison	July	25, 1858	Eng. & caretaker	April	27, 1891	60 00	12	"	720 00
"	"	"	Christopher White	Nov.	20, 1844	Fireman	Nov.	9, 1885	50 00	12	"	600 00
"	"	"	James A. Paul	Aug.	1, 1837	Caretaker	Oct.	13, 1891	41 67	12	"	500 00
"	"	Post office	James Wolfe	Mar.	10, 1850	Engineer	Dec.	1, 1893	55 00	12	"	660 00
"	"	"	Edward Haney	Feb.	22, 1849	Hoist attendant	Nov.	27, 1882	50 00	12	"	600 00
St. Stephen	"	"	Samuel Topping	April	2, 1839	Caretaker	May	25, 1887	33 33	12	"	400 00
Sussex	"	"	Mrs. N. Dryden	June	21, 1840	"	Mar.	26, 1901	25 00	12	"	300 00
Woodstock	"	"	Charles Trafton	Jan.	20, 1839	"	May	1, 1897	33 33	12	"	400 00
Aylmer	P.Q.	"	A. Bourgeau			"	April	9, 1904	5 00	12	"	60 00
Buckingham	"	"	F. F. Bisson			"	Feb.	3, 1903	10 00	12	"	120 00
Coaticook	"	Public building	Israel Baldwin	Nov.	16 1839	"	June	27, 1889	33 33	12	"	400 00
Drummondville	"	"	A. Paré	April	27, 1842	"	"	5, 1902	25 00	12	"	300 00
Granby	"	"	J. A. Beauchemin	May	1 1862	"	May	12, 1903	25 00	12	"	300 00
Fraserville	"	Post office	Z. Raymond	Nov.	, 1831	"	Nov.	2, 1897	25 00	12	"	300 00
Hochelaga	"	"	J. H. Brown	Oct.	7, 1851	"	Mar.	27, 1902	16 66	12	"	200 00
Hull	"	" &c.	J. I. Madore	Dec.	1, 1843	"	"	8, 1900	12 50	12	"	150 00
Joliette	"	"	A. Ratel	"	29, 1845	"	Sept.	1, 1897	33 33	12	"	100 00
Lachine	"	"	P. O. Robert	Sept.	7, 1846	"	Jan.	26, 1899	8 33	12	"	100 00
Laprairie	"	"	Jos Brisson	Nov.	11, 1869	"	Nov.	22, 1901	1 16	12	"	50 00
L'Assomption	"	"	E. Arbour			"	July	1, 1904	12 50	12	"	150 00
Montreal	"	Dominion building	S. T. Murphy	May,	6, 1865	Foreman engin'r	Mar.	2, 1903	100 00	12	"	1,200 00
"	"	"	Ed. Lanctot	April	14, 1837	Caretaker	Dec.	3, 1898	41 67	12	"	500 00
"	"	Examining warehouse	M. Boyer	Feb.	18, 1848	Fireman	Mar.	1, 1882	50 00	12	"	600 00
"	"	"	F. Athole			"	Dec.	12, 1903	45 00	12	"	540 00
"	"	"	Jos. Loiseau	Jan.	1, 1869	Caretaker	Nov.	15, 1901	15 00	8	"	360 00
"	"	"	F. Nadon			Cleaner	Dec.	15, 1902	45 00	12	"	540 00
"	"	Post office	F. Green	Oct.	4, 1837	Engineer	Jan.	1, 1885	60 00	12	"	720 00
"	"	"	L. D. Thibault	Jan.	28, 1861	Electrician	June	1, 1885	75 00	12	"	900 00
"	"	"	G. S. Gingras	Dec.	13, 1867	" &c.	Jan.	7, 1895	75 00	12	"	900 00
"	"	"	I. Trudeau	Jan.	22, 1863	Caretaker	Oct.	1, 1902	50 00	12	"	600 00
"	"	"	Oscar Renaud	Feb.	19, 1862	Elevator man	Sept.	10, 1898	50 00	12	"	600 00
"	"	"	Art. Forget	July	25, 1867	"	Dec.	15, 1893	50 00	12	"	600 00
"	"	"	S. N. Nickle	Dec.	25, 1871	"	Mar.	1, 1894	55 00	12	"	660 00
"	"	"	L. Brault	"	29, 1854	"	Sept.	1, 1901	50 00	12	"	600 00
"	"	"	C. Vadeboncoeur	May	17, 1842	Caretaker w. c.	Feb.	6, 1864	50 00	12	"	600 00
"	"	"	J. Dubrisac	Feb.	2, 1863	Messenger	Dec.	15, 1893	2 00 p.d.	12	"	730 00
"	"	Inland revenue	Louis St. Jean	Sept.	17, 1840	Fireman	"	1, 1892	50 00	12	"	600 00
"	"	Examining warehouse	H. Marchand	"	6, 1849	"	"	2, 1882	15 00	12	"	540 00
"	"	Custom house	C. Dandelin	June	19 1843	"	July	16, 1892	37 50	12	"	450 00
"	"	"	H. Valiquette			Carpenter	Feb.	1, 1904	52 00	12	"	624 00
"	"	Custom house and ex. wareh.	B. Lajeunesse	Nov.	20, 1861	Fireman	Nov.	23, 1896	50 00	12	"	600 00
"	"	Drill hall and armoury	J. Gagnier	April	4, 1867	Engineman	Feb.	14, 1899	45 00	12	"	500 04

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at the Dominion Public Buildings, &c. *Continued.*

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary.	Time employed each Year.	Yearly Salary.
						$ cts.		$ cts.
Montreal	" "	J. Doherty		Fireman	Dec. 15, 1903	15 00	8 "	360 00
Quebec	Examining warehouse	D. P. Kennedy	Feb. 9, 1865	Engineer	April 1, 1897	75 00	12 "	900 00
"	"	T. P. McLaughlin	Aug. 25, 1871	Fireman	July 26, 1892	53 33	12 "	640 00
"	Cullers office	James O'Neil	" 15, 1861	"	Aug. 1, 1894	45 00	12 "	540 00
"	Custom office	John R. Mountain	Nov. 1, 1848	"	Nov. 10, 1888	45 00	12 "	540 00
"	Gov. Gen'ls quarters	J. Parent	May 29, 1852	"	Jan. 1, 1902	33 33	12 "	400 00
"	Post office	J. Roy	Feb. 25, 1836	Caretaker	Sept. 1, 1897	58 33	12 "	700 00
"	"	F. J. Cooper	July 8, 1858	Fireman	June 25, 1895	55 00	12 "	660 00
Peribonca	Immigration building	E. Roy	Dec. 14, 1877	Caretaker	Oct. 1, 1902	25 00	12 "	300 00
Roberval	"	J. B. Carbonneau	Aug. 12, 1864	"	Nov. 20, 1901	25 00	12 "	300 00
Rimouski	Post office	A. Lepage	Feb. 7, 1866	"	Jan. 1, 1901	12 50	12 "	150 00
Richmond	Public building	H. Desmarais	July 14, 1869	"	May 7, 1898	25 00	12 "	300 00
Sherbrooke	"	O. Desève	Aug. 6, 1848	"	April 2, 1898	33 33	12 "	400 00
Sorel	Post office	C. Robitaille	Jan. 22, 1848	"	Sept. 1, 1897	33 33	12 "	400 00
Saint-Henri	"	A. C. A. Bissonnette	May 25, 1858	"	Mar. 4, 1895			
Saint-Hyacinthe	Public building	F. X. Tétrault	Nov. 8, 1846	"	Aug. 5, 1893	33 33	12 months	400 00
Saint-Jean	Post office	L. Forrant	Jan. 31, 1849	"	April 14, 1897	29 16	12 "	350 00
Saint-Jérôme	Public building	J. Savard	Oct. 24, 1859	"	Sept. 1, 1900	33 33	12 "	400 00
Trois-Rivières	Custom house	Ph. Gravelle	June 3, 1828	"	Feb. 1, 1891	25 00	12 "	300 00
"	Post office	A. Ganthier	Feb. 1, 1850	"	" 1, 1898	33 33	12 "	400 00
Victoriaville	Public building	G. Beaudet		"	Mar. 3, 1904	6 25	12 "	75 00
Amherstburg, Ont.	Post office	R. Elliott	Aug. 22, 1835	"	May 7, 1897	33 33	12 "	400 00
Almonte	"	Wm. Moulton	Mar. 23, 1839	"	Jan. 29, 1891	33 33	12 "	400 00
Arnprior	Public building	R. B. McCrerary	Jan. 11, 1862	"	Mar. 15, 1899	33 33	12 "	400 00
Brockville	Post office	H. Purvis	Sept. 12, 1826	"	Dec. 15, 1900	33 33	12 "	400 00
Brantford	"	John Squire	April 24, 1842	"	Oct. 27, 1880	50 00	12 "	600 00
Barrie	"	E. Sivigny	Mar. 19, 1847	"	May 1, 1903	41 66	12 "	500 00
Belleville	"	S. Haight	Aug. 26, 1857	"	Jan. 24, 1901	50 00	12 "	600 00
Berlin	"	J. Clemens	June 21, 1840	"	May 15, 1900	33 33	12 "	400 00
Brampton	"	James McBride	Oct. 5, 1840	"	Jan. 29, 1901	33 33	12 "	400 00
Carleton Place	"	Jas. E. Halfpenny	April 17, 1858	"	May 13, 1892	25 00	12 "	300 00
Chatham	"	W. W. Mitchell	May 25, 1848	" &c	Jan. 7, 1885	41 66	12 "	500 00
Cornwall	"	R. Conroy	Nov 6, 1848	"	April 1, 1897	33 33	12 "	400 00
Cayuga	"	G. A. Gibson	May 29, 1861	"	Sept. 3, 1891	4 16	12 "	50 00
Clinton	"	J. Scott		"	Feb. 9, 1904	4 16	12 "	50 00
Cobourg	"	John Boyd	Dec. 9, 1836	"	Aug. 1, 1901	33 33	12 "	400 00

Deseronto	"	"	M. Hart	Jan.	18,	1862	"	July	1,	1903	33	33	12	"		100 00
Dundas	"	"	Wm. Graham	Dec.	5,	1853	"	"	1,	1898	4	16	12	"		50 00
Galt	"	"	T. Barrett	June	17,	1861	"	Aug.	1,	1902	33	33	12	"		400 00
Guelph	"		R. McLeod	July	30,	1865	"	May	25,	1901	33	33	12	"		400 00
Goderich	"	" &c	G. Bissett	April	14,	1851	"	Sept.	1,	1897	33	33	12	"		400 00
Hamilton	"	Dominion building	Alfred Barnard	Dec.	27,	1847	"	Dec.	10,	1894	50	00	12	"		600 00
"	"	"	J. Wigglesworth	Aug.	7,	1863	Fireman	Oct.	1,	1896	50	00	8	"		400 00
"	"	"	Thomas Nicholson	Dec.	17,	1857	Engineer	Mar.	2,	1887	50	00	12	"		600 00
Ingersoll	"	Public building	John McDonald	June	30,	1841	Caretaker	Nov.	20,	1900	33	33	12	"		400 00
Kingston	Ont.	R. Military College	T. Harrison				Fireman				45	74	7 months			320 00
"	"	Armoury	F. Forsythe				Engineer	Feb.	11,	1904	50	00	12	"		600 00
"	"	R. Military College	Wm. F. Hazlett	May	27,	18 4	Engineer	Nov.	20,	1900	75	00	12	"		900 00
"	"	"	J. Quigley	Oct.	30,	1857	Fireman	June	1,	1903	55	00	12	"		660 00
"	"	"	M. Redmon	"	2,	1867	"	Jan.	29,	1902	45	00	12	"		540 00
"	"	"	L. Cochrane	Mar.	1,	1879	Electrician	July	29,	1902	55	00	12	"		660 00
London	"	Custom house	M. Mulhern	Sept.	1,	1837	Engineman	Sept.	18,	1888	50	00	12	"		600 00
"	"	"	Wm. Greer	Oct.	12,	1839	Caretaker	Mar.	16,	1884	33	33	12	"		400 00
"	"	Post office	John Price	"	6,	1836	Engineer	Jan.	14,	1884	50	00	12	"		600 00
Lindsay	"	" and C. house	Wm. Galbraith	Jan.	8,	1841	Caretaker	Nov.	17,	1893	33	33	12	"		400 00
Napanee	"	" "	Mrs. C. E. Webster	July	12,	1846	"	Oct.	1,	1901	33	33	12	"		400 00
Niagara Falls	"	"	Wm. J. Sheppard	Jan.	1,	1854	"	Jan.	15,	1897	33	33	12	"		400 00
Orangeville	"	"	D. McPherson	April	30,	1851	"	July	15,	1900	33	33	12	"		400 00
Orillia	"	"	John Frawley	Mar.	14,	1841	"	Nov.	1,	1898	25	00	12	"		300 00
Paris	"	Public building	Sam Lee			1842	"	July	7,	1902	33	33	12	"		400 06
Peterborough	"	Post office	John Irwin	May	17,	1842	"	Sept.	8,	1887	25	00	12	"		300 00
"	"	Custom house	Wm. Taylor	Nov.	25,	1839	"	Jan.	26,	1899	25	00	12	"		300 00
Petrolea	"	Post office	H. McNaughton	Sept.	14,	1862	"	May	1,	1903	33	33	12	"		400 00
Picton	"	Public building	D. Wellbanks	Feb.	8,	1850	"	April	11,	1902	33	33	12	"		400 00
Port Arthur	"	"	John Whitehead	April	15,	1839	"	Sept.	11,	1893	25	00	12	"		300 00
Port Colborne	"	Post office	Wm. Armstrong	Sept.	9,	1846	"	June	11,	1888	20	06	12	"		240 00
Port Hope	"	"	Levi Reynolds	Feb.	15,	1839	"	Nov.	17,	1885	33	33	12	"		100 00
Pembroke	"	Public building	Samuel Hamilton	June	4,	1834	"	Oct.	29,	1890	33	33	12	"		100 00
Prescott	"	Post office	R. Birks	April	6,	1822	"	May	1,	1899	33	33	12	"		400 00
Rat Portage	"	Public building	Mrs. J. Link	May	10,	1850	"	Dec.	7,	1901	33	33	12	"		100 00
Sarnia	"	"	J. H. Dyble	Aug.	25,	1860	"	Nov.	7,	1903	33	33	12	"		100 00
Smith's Falls	"	"	P. W. Lewis	"	19,	1863	"	Jan.	8,	1896	25	00	12	"		300 00
Stratford	"	Post office, &c	J. P. Murray	July	29,	1855	Engineer	"	26,	1900	50	00	12	"		600 00
St. Catharines	"	"	D. C. Holmes	Sept.	30,	1842	Caretaker	Sept.	1,	1903	33	33	12	"		400 00
St. Thomas	"	"	G. Luton	May	25,	1857	"	April	11,	1903	33	33	12	"		400 00
Strathroy	"	Public building	Wm. J. Johnston	"	12,	1840	"	Oct.	25,	1890	33	33	12	"		400 00
Toronto	"	Dominion buildings	H. E. Hamilton	April	14,	1838	Foreman, engineer	April	10,	1902	100	00	12	"		1,200 00
"	"	Inland revenue building	C. H. Baillie	Sept.	22,	1852	Fireman	Jan.	13,	1891	55	00	12	"		660 00
"	"	Custom-house	Fred. Faragher	Oct.	16,	1865	"	Nov.	1,	1889	55	00	12	"		660 00
"	"	"	Ed. Switzer	"	10,	1856	Hoist attendant	Aug.	18,	1901	55	00	12	"		660 00
"	"	Examining warehouse	James Cosgrove	Feb.	10,		Engineer				70	00	12	"		840 00
"	"	"	Ed. Appleton	Sept.	26,	1864	Fireman	Sept.	23,	1886	60	00	12	"		720 00
"	"	"	Alexander Dey	"	27,	1863	Hoist attendant	Dec.	1,	1887	50	00	12	"		600 00
"	"	"	Wm. Chenery	Dec.	19,	1851	"	"	1,	1887	50	00	12	"		600 00
"	"	"	F. Simpson	Jan.	8,	1859	"	Sept.	1,	1903	50	00	12	"		600 00
"	"	"	Thos. Jones	Nov.	10,	1853	Watchman	April	1,	1902	50	00	12	"		600 00

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at the Dominion Public Buildings, &c.—*Concluded.*

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointement	Monthly Salary.	Time employed each year.	Yearly Salary.
						$ c.		$ c.
Toronto	Union station	J. Gormaly	" 26, 1872	Hoist attendant.	Oct. 17, 1901	50 00	12	600 00
"	"	G. H. Armstrong		Elevatorman	April 11, 1904	50 00	12	600 00
"				Caretaker	Jan. 12, 1904	55 00	12	660 00
"	P. O. Station	James Rae			Oct. 9, 1897	50 00	8	400 00
"	Post office	J. Somers	April 8, 1835	Engineer	Nov. 1, 1896	55 00	8	440 00
"	"	George Latray	May 20, 1858	Fireman	Oct. 1, 1896	55 00	8	440 00
"	"	W. J. Graham	Mar. 16, 1840	"	April 11, 1904	45 00	12	540 00
"	"	J. C. Davidson	May 21, 1876	Elevatorman	April 11, 1904	50 00	12	600 00
"	Drill hall	Richard Eyre	Oct. 11, 1849	Fireman	Mar. 25, 1895	50 00	12	600 00
"	"	D. Glionna	Aug. 8, 1835	"	Oct. 1, 1898	50 00	12	600 00
Trenton	Public building	David Allen	May 13, 1841	Caretaker	Aug. 31, 1889	33 33	12	400 00
Windsor	Post office	I. Belleperche	Oct. 26, 1848	Engineman	Dec. 24, 1897	50 00	8	400 00
"	"	W. Curtis	Mar. 6, 1844	Caretaker	Nov. 9, 1880	33 33	12	400 00
"	Drill hall	Peter Smith		Engineer	Jan. 21, 1902	50 00	8	400 00
Walkerton	Public building	T. Gibson	Aug. 14, 1838	"	Nov. 1, 1897	33 33	12	400 00
Woodstock	"	Robert Kerr	June 6, 1864	"	Dec. 11, 1901	33 33	12	400 00
Brandon Man.	"	T. Giles	Mar. 30, 1843	"	Aug. 1, 1897	50 00	12	600 00
Portage la Prairie	"	J. S. Telfer		"	July 1, 1904	33 33	12	400 00
Winnipeg	Post office	J. D. McDougall	May 1, 1843	Engineman	Jan. 21, 1900	75 00	12	900 00
"	"	John Mikulezky	" 6, 1879	Fireman	Nov. 13, 1900	55 00	12	660 00
"	"	Joseph Coutu	" 10, 1843	Hoist attendant.	Mar. 16, 1887	55 00	12	660 00
"	"	Joseph Gagnier	April 11, 1853	Watchman	June 7, 1892	55 00	12	660 00
"	Custom-house	J. G. Russell	Oct. 15, 1857	Fireman	Dec. 12, 1900	45 00	8	360 00
Calgary N.W.T.	Public building	E. N. Brown	Mar. 8, 1845	Caretaker	Jan. 24, 1891	45 00	12	540 00
"	Court-house	J. B. Mitchell	May 21, 1841	"	Dec. 1, 1902	45 00	12	540 00
Carnduff	"	Alex Deans	Sept. 19, 1859	"	Oct. 1, 1903	41 66	12	500 00
Edmonton	Land and registry office	R. Wylie	July 7, 1859	"	June 21, 1894	33 33	12	400 00
"	Court-house	L. Brunelle		"	April 7, 1903	45 00	12	540 00
Lethbridge	Court house & C. house	Mrs. E. Hodder	Aug. 1, 1854	"	Mar. 1, 1901	45 00	12	540 00
Moosomin	"	J. C. Jopp	Jan. 6, 1848	"	April, 29, 1897	50 00	12	600 00
Moose-jaw	"	R. Smale	July 21, 1865	"	Nov. 21, 189-	33 33	12	400 00
Macleod	"	John Ryan	June 24, 1827	"	" 1, 1893	55 00	12	660 00
Medicine Hat	"	J. H. G. Bray	Jan. 24, 1841	"	June, 7, 1900	45 00	12	540 00
Prince Albert	Land and registry office	Mrs. G. Cassie		"	Jan. 1, 1904	33 33	12	400 00
Regina	Court-house & C.-house	P. McAra	Mar. 24, 1840	"	Aug. 1, 1889	50 00	12	600 00
"	&c	Jas. McLachlan	Dec. 9, 1840	Fireman	Oct. 3, 1898	40 00	8	320 00
"	Land office	W. J. Gore	July 22, 1863	Caretaker	May 6, 1901	45 00	12	540 00

Wolseley	"	Court-house	W. Hare	Dec.	2, 1857	"	Mar.	1, 1901	45	00	12	"	540 00
Yorkton	"	"	Geo. Betts			"	Feb.	6, 1903	41	66	12	"	500 00
Atlin	B.C.	Public building	J. A. Fraser	Jan.	1, 1851	"	June	26, 1901	12	50	12	"	150 00
Kamloops	"	Post office	W. Saul	Dec.	15, 1837	"	April,	1, 1902	50	00	12	"	600 00
Nanaimo	"	Public building	J. Thompson	Sept.	2, 1836	"	May	1, 1897	50	00	12	"	600 00
Nelson	"	"	B. B. Smith	"	12, 1845	"	Mar.	7, 1903	50	00	12	"	600 00
New Westminster	"	Post office	G. D. McMurphy	Dec.	21, 1870	"	Jan.	18, 1901	50	00	12	"	600 00
Rossland	"	Public building	D. Mackenzie	Oct.	14, 1848	"	April	1, 1903	50	00	12	"	600 00
Vancouver	"	"	S. Chisholm	April	18, 1850	"	Oct.	1, 1903	50	00	12	"	600 00
"	"	"	P. Powers	Mar.	21, 1836	Watchman	Feb.	10, 1901	50	00	12	"	600 00
"	"	"	C. F. Bosomworth			Asst. caretaker	July	7, 1904	50	00	12	"	600 00
Victoria	"	New Dominion building	Wm. McKay	Dec.	31, 1857	Caretaker	Feb.	4, 1898	50	00	12	"	600 00
"	"	Dominion building	A. Johnson	May	12, 1858	Asst. caretaker	April	1, 1899	60	00	12	"	720 00
"	"	"	R. C. Bradley	Aug.	13, 1843	Fireman	Oct.	1, 1903	45	00	8	"	360 00
"	"	"	J. McMillan	July	8, 1876	Elevatorman	Nov.	27, 1898	60	00	12	"	720 00
"	"	"	Geo. Noot	Aug.	9, 1845	"	Oct.	15, 1900	45	00	12	"	540 00
"	"	Old Custom-house	Geo. Lyall	Feb.	12, 1843	Caretaker	May	8, 1900	50	00	12	"	600 00
Dawson	Y.T.	Post office	J. W. Wilson			"	Jan.	1, 1902	160	00	12	"	1,920 00
"	"	"	W. Bishop			Watchman	May	1, 1901	160	00	12	"	1,920 00
"	"	"	Mrs. R. Palardis			Charwoman	"	1, 1902	150	00	12	"	1,800 00
"	"	Government House	S. Waldron			Caretaker	Oct.	15, 1901	125	00	12	"	1,500 00
White Horse	"	Public building	C. J. McLennan			"	"	30, 1902	100	00	12	"	1,200 00

JOS. VINCENT.

OFFICIAL CORRESPONDENCE

DEPARTMENT OF PUBLIC WORKS

FROM

JULY 1, 1867, TO JUNE 30, 1904

OFFICIAL CORRESPONDENCE.

Letters Received and Sent from July 1, 1867, to June 30, 1904

Year.	Received.	Sent.
1867—From July 1 to December 31	2,075	1,511
1868 " January 1 to December 31	3,498	2,317
1869 " " "	3,448	2,171
1870 " " "	4,961	3,185
1871 " " "	6,268	3,983
1872 " " "	8,333	4,428
1873 " " "	10,072	5,707
1874 " " "	9,800	5,043
1875 " " "	9,006	5,006
1876 " " "	7,971	4,473
1877 " " "	7,517	4,425
1878 " " "	6,886	4,021
1879 " " to October 6	7,186	4,547
1879 " October 7 to December 31	2,033	810
1880 " January 1 "	8,451	4,411
1881 " " "	9,599	5,529
1882 " " "	10,505	5,699
1883 " " "	11,633	6,227
1884 " " "	13,114	6,903
1885 " " "	8,977	5,321
1886 " " "	9,644	5,352
1887 " " to June 30	4,866	2,735
1887 July 1 " 1888	10,493	6,343
1888 " " " 1889	10,522	7,042
1889 " " " 1890	10,098	7,448
1890 " " " 1891	10,576	7,286
1891 " " " 1892	11,637	6,700
1892 " " " 1893	11,720	6,220
1893 " " " 1894	9,517	6,028
1894 " " " 1895	10,190	5,148
1895 " " " 1896	10,223	5,573
1896 " " " 1897	11,404	5,033
1897 " " " 1898	9,640	5,250
1898 " " " 1899	9,639	4,784
1899 " " " 1900	12,139	5,938
1900 " " " 1901	13,179	6,255
1901 " " " 1902	15,880	5,067
1902 " " " 1903	13,140	6,373
1903 " " " 1904	11,300	5,878

LETTERS Sent from Chief Engineer's Office, from January, 1880, to June 30, 1904.

Year.	—	No.
1880	From January 10 to June 30	418
1880	" July 1 " 1881	1,795
1881	" " " 1882	2,352
1882	" " " 1883	2,651
1883	" " " 1884	3,611
1884	" " " 1885	3,119
1885	" " " 1886	2,867
1886	" " " 1887	3,281
1887	" " " 1888	3,552
1888	" " " 1889	4,229
1889	" " " 1890	3,374
1890	" " " 1891	3,948
1891	" " " 1892	4,009
1892	" " " 1893	4,232
1893	" " " 1894	3,966
1894	" " " 1895	4,603
1895	" " " 1896	4,239
1896	" " " 1897	4,994
1897	" " " 1898	4,696
1898	" " " 1899	5,277
1899	" " " 1900	7,366
1900	" " " 1901	4,341
1901	" " " 1902	6,759
1902	" " " 1903	4,327
1903	" " " 1904	5,295

NOTE.—The letters, including returns, received in the Chief Engineer's Office may be estimated at the rate of two received to one sent.

LETTERS Received and Sent, Chief Architect's Office, from January 1, 1880, to June 30, 1904.

—	Received.	Sent.
1880—From January 1 to June 30		1,273
1880 " July 1 " 1881		2,943
1881 " " " 1882		2,859
1882 " " " 1883	3,538	4,600
1883 " " " 1884	3,860	6,604
1884 " " " 1885	4,500	6,718
1885 " " " 1886	6,075	6,450
1886 " " " 1887	6,816	6,380
1887 " " " 1888	6,947	6,870
1888 " " " 1889	6,484	7,667
1889 " " " 1890	7,448	6,578
1890 " " " 1891		7,751
1891 " " " 1892	6,113	4,260
1892 " " " 1893	7,428	6,453
1893 " " " 1894	6,900	4,517
1894 " " " 1895	7,538	5,327
1895 " " " 1896	7,843	5,783
1896 " " " 1897	10,700	8,200
1897 " " " 1898	10,867	8,547
1898 " " " 1899	10,913	8,762
1899 " " " 1900	12,386	9,878
1900 " " " 1901	12,287	9,860
1901 " " " 1902	12,560	10,330
1902 " " " 1903	13,430	11,106
1903 " " " 1904	14,710	15,590

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR

FROM JULY 1, 1903, TO JUNE 30, 1904

SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF THE REVISED STATUTES OF CANADA, CHAPTER 37, SECTION 28

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1905

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, Viscount Howick, Baron Grey of Howick, in the County of Northumberland, in the Peerage of the United Kingdom, and a Baronet; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, &c., &c., Governor General of Canada.

May it Please Your Excellency,—

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year from July 1, 1903, to June 30, 1904.

All of which is respectfully submitted.

H. R. EMMERSON,
Minister of Railways and Canals.

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MAPS

ACCOMPANYING REPORT OF THE DEPUTY MINISTER.

RAILWAY SYSTEM.

1. General map of the Dominion.
2. British Columbia and Alberta.
3. Manitoba and Assiniboia and part of Saskatchewan.
4. Ontario and Manitoba.
5. Ontario and Quebec.
6. Nova Scotia, New Brunswick, Prince Edward Island and part of Quebec.

CANAL SYSTEM.

7. Canadian Ship Canal, and also St. Mary's Falls Canal, Mich., U.S.A.
8. Line of Welland Canal between Lakes Erie and Ontario.
9. Trent Navigation and Murray Canal.
10. St. Lawrence, Ottawa, Rideau and Richelieu Canals.

REPORT OF THE DEPUTY MINISTER.

To the Honourable H. R. Emmerson,
Minister of Railways and Canals.

Sir,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal year ended June 30, 1904.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers in the department, are given in appendices.

In Part II. will be found statements showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, and on each of the government railways; also a statement showing the payments made, year by year, to subsidized railways, with the aggregates of such payments.

GENERAL SUMMARY.

The expenditures of the department for the fiscal year 1903-04 on its works of construction, operation and maintenance, both railway and canal, and in furtherance, by subsidy under authority of parliament, of outside railway enterprises, are as follows:—

The government railway expenditure totals $12,351,250.05, of which $2,619,059.86 was chargeable to capital account, $2,132,231.62 to income, and $7,599,958.57 to revenue. There was paid out from the consolidated fund as subsidies to railways other than the government roads a total of $2,046,878.45, which is included in the above under 'Income.'

The expenditure on canals aggregates $2,980,558.88, of which $1,880,787.30 was chargeable to capital, $302,409.02 to income, and out of revenue, $436,034.76, for staff, and $361,327.90 for repairs.

Adding to the above the further sum of $36,262.32 for miscellaneous expenditures, the total departmental expenditure for railways and canals for the past fiscal year amounted to $15,368,071.25.

The total revenue derived from the government works for the past fiscal year was as follows:—

From railways $6,627,255.51, and from canals, $79,536.51, of which the sum of $72,701.28 was derived from hydraulic rents.

By Orders in Council of April 27, and May 19, 1903, tolls for passage through any of the government canals were abolished, the exemption, which was by way of experiment, to continue in force for the two seasons of navigation of 1903 and 1904, only.

The total government expenditure on railway construction prior to and since confederation (July 1, 1867), up to July 1, 1904, amounts, on capital account, to $142,648,039.09, which includes the sum of $25,000,000 granted (from capital) to the Canadian Pacific Railway Company for its main line. In addition there has been expended from the consolidated fund a total of $139,556,724.15, including $31,341,933.16, paid as subsidies to railways other than the Canadian Pacific Railway, and $107,110,755.93, for working expenses of the government railways, making a total expenditure of $282,204,763.24. Of this amount the sum of $13,881,460.65 was expended on construction works prior to confederation, on portions of what is now the Intercolonial Railway system.

The total revenue received from the government railways from July 1, 1867, to July 1, 1904, amounts to $97,569,608.11.

The government expenditure on canals from July 1, 1867, to July 1, 1904, amounts, on capital account, to $87,223,164.67, and from the consolidated fund to $21,090,389.93, making a total of $108,313,554.60.

The total revenue derived from canals during the same period is $13,320,222.95.

The total expenditure on railways and canals up to July 1, 1904, is, as above, $390,518,317.84, to which must be added for miscellaneous expenditures, embracing both, $629,294.59; making a grand total of $391,147,612.43.

The total revenue derived from railways and canals from July 1, 1867, to July 1, 1904, is $110,889,831.06.

Details of the above will be found in the statements of the accountant of the department, Part II., pages 3 to 49, inclusive.

RAILWAYS.

The present report deals with those railways of the Dominion directly controlled by the Federal Government, and others towards the construction of which subsidies have been granted or authorized.

In an appendix will be found a special statistical report, embodying returns for the fiscal year ended June 30, 1904, made by Canadian railway companies, as required by statute. This report gives detailed information as to railway operations in Canada, including the government roads, of which the following is a summary :—

Steam Railways.

The number of steam railways in actual operation, including the two government roads, the Intercolonial and the Prince Edward Island Railways, at the close of the fiscal year, June 30, 1904, was 191 ; some of these, however, are amalgamated or leased, making the total number of controlling companies 85, not including the government railways. The number of companies absorbed by amalgamation was 54, and the number of leased lines was 38.

On June 30, 1904, the number of miles of completed railway was 19,611, an increase of 534 miles, besides 3,327 miles of sidings. The number of miles laid with steel rails was 19,545, of which 763 miles was double track. The number of miles in operation was 19,431.*

The paid-up capital amounted to $1,186,546,918, an increase of $39,996,149.** The gross earnings of the year amounted to $100,219,436, an increase of $4,154,909, and the working expenses aggregated $74,563,162, an increase of $7,081,638, compared with those of the previous year ; leaving the net earnings $25,656,274, a decrease of $2,926,-729. The number of passengers carried was 23,640,765, an increase of 92,023, and the freight traffic amounted to 48,097,519 tons, an increase of 724,102 tons. The total number of miles run by trains was 61,312,002, an increase of 929,082.

The rolling stock comprised : For passenger service, 2,149 cars ; for freight service, 84,422, including 54,877 box and cattle cars; and for operation and maintenance service 4,157, making a total of 90,728 cars. Of these, 75,273 were equipped with air-brakes, and 80,585 were fitted with automatic couplers, an increase of 4,049 over the previous year. The locomotives numbered 2,768.

The accident returns show a total of 395 persons killed, 25 being passengers, 192 employees and 178 others, and, in addition, 1,405 injured, of whom 234 were passengers, 912 employees and 259 others. By train collisions and derailments 8 passengers, 60 employees and 9 others were killed, and 130 passengers, 165 employees and 14 others were injured. Through jumping on and off trains or engines in motion, 7 passengers, 7 employees and 7 others were killed, and 57 passengers, 84 employees and 30 others were injured. Through walking, lying or being on the track, 5 passengers, 41 employees and 103 others were killed, and 59 employees and 95 others were injured. Through falling from cars or engines, 5 passengers, 34 employees and 8 others were killed, and 17 passengers, 130 employees and 14 others were injured. Through being struck by engines or cars at highway crossings, 1 employee and 36 others were killed, and 3 passengers, 6 employees and 56 others were injured. In the work of coupling cars, 11 employees were killed, and 2 passengers, 162 employees and 3 others were injured, a total of 178, as against 211, 241, 290 and 363 in the four preceding years, respectively ; a very satisfactory testimony to the efficiency and value of the automatic car coupler, now, happily, growing into general use.

By the Railway Act, 1903, section 211 (*c.*) railway companies are required to provide and use on their engines and cars 'couplers which couple automatically by impact, and which can be uncoupled without the necessity of men going in between the ends of the cars.' They are allowed, however, until January 1, 1906, for fitting with such couplers cars built prior to the passage of the Act.

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*Of this mileage the Canadian Pacific Railway comprised 8,062 miles (4,742·40 owned and 3,319·60 leased) ; the Grand Trunk Railway 3,158·60 miles; the Intercolonial 1,342·26 miles, including the Windsor Branch; the Canada Atlantic 458·60 miles (400:30 miles owned, and 58·30 leased) and the Canadian Northern 1,349·60 miles (998·65 owned, and 350·95 leased).

**The main items of this increase are the following: Canadian Northern, $1,959.20; Canadian Pacific, $13,486,685 ; Grand Trunk, $7,906,002 ; Intercolonial, $1,880,856.

Electric Railways (including Street Railways and Tramways).

At the close of the fiscal year ended June 30, 1904, there were 767 miles completed, of which 745 miles were laid with steel rails, 188 miles being double tracked. The paid-up capital amounted to $50,399,188, of which the municipal aid amounted to $173,000 (including $100,000, subscription to shares, and $40,000, loan). The number of miles in operation was 745, the actual increase being 58 miles, as a portion of the mileage returned in the previous year was double track. The gross earnings aggregated $8,453,609, an increase of $1,219,932, and the working expenses $5,326,517, an increase of $853,659, leaving the net earnings $3,127,092, an increase of $366,273. The number of passengers carried was 181,689,998, † an increase of 26,027,186, and the freight carried amounted to 400,161 tons, an increase of 28,875 tons. The car mileage was 42,066,124, an increase of 4,037,595 miles. The accident returns show a total of 53 persons killed during the year, 10 being passengers, 3 employees and 40 others. In addition, 844 persons were injured. Of these 508 were passengers, 64 employees and 272 others ; 1 employee and 2 others were killed, and 35 passengers, 10 employees and 8 other persons injured in collisions and derailments ; 2 passengers were killed, and 307 passengers, 4 employees and 2 other persons injured through jumping on or off the cars when in motion ; 1 passenger and 21 others were killed, and 7 passengers, 1 employee and 102 other persons were injured through walking or being on the track ; 4 passengers and 1 other person were killed, and 118 passengers and 25 employees injured through falling from cars ; 3 passengers, 2 employees and 15 other persons were killed and 20 passengers, 2 employees and 145 other persons were injured by being struck by engines or cars at highway crossings. There were 8 employees injured by the work of coupling cars, and 3 employees injured while at work near track making up trains. Power was supplied in 12 cases by water, and in 30 cases by steam. Ontario has 375 miles, Quebec 253, New Brunswick 13, Nova Scotia 44, Manitoba 28, and British Columbia 51 miles. Returns were received from 49 companies.

All Railways, Steam and Electric.

At the close of the fiscal year ended June 30, 1904, the conjoined statistics of steam and electric roads (including street railways) show the following results : The number of companies was 240. There were 20,378 miles of railway completed, 20,176 miles being in operation. The paid-up capital amounted to $1,236,946,106. The gross earnings were $108,673,045, and the total working expenses $79,889,679, making the net earnings $28,783,366. 205,330,763 passengers, and 48,497,680 tons of freight were carried ; 35 passengers were killed.

Again this year trouble has been experienced owing to the dilatory manner in which returns are made by companies, the work of compiling these railway statistics being thus greatly impeded, and the issue of the departmental report much delayed.

†The city street railways and their extensions carried passengers as follows : Montreal (3 companies), 62,276,903 ; Toronto (5 companies), 58,697,920 ; Ottawa, 7,649,850 ; Quebec, 5,179,091 ; Hamilton (4 companies), 6,673,878 ; Winnipeg, 7,763,562 ; London, 4,104,719 ; Halifax, 3,369,280 ; St. John, 1,396,389 ; and Vancouver, Victoria and New Westminster (operated, and returns made, by one company), 8,869,486.

No returns whatever have been received from the following three companies, namely,—

Lenora and Mount Sicker Railway Company, (B.C.)

Princton Branch of the Washington County Railway Company (U.S.)

St. Thomas Electric Street Railway.

In the case of the following companies, returns were not received until after the 27th of December, 1904,—too late to be included, namely:—

Hampton and St. Martin's Railway Company of New Brunswick.

New Brunswick Coal and Railway Company.

Fredericton and St. Mary's Railway Bridge Company.

Quebec Southern Railway Company.

The figures of last year's return have been used this year in all the above cases, except for the Princeton Branch and the St. Thomas Electric Street Railway, for which no figures were obtainable.

In the case of the Metropolitan Electric Railway, Toronto, no return was given as to number of passengers carried nor as to miles run; the figures of last year for these items have been used.

GOVERNMENT RAILWAYS IN OPERATION.

The government railways are: The Intercolonial, the Windsor Branch (maintained only), and the Prince Edward Island Railway.

Details respecting these railways and their operations will be found in the appendices, Part I., containing reports from the chief engineer of the department, the general manager of government railways, and the officials of these roads.

The gross earnings of all the government roads for the past fiscal year, 1903-04, amounted to $6,627,255.51, and compared with those of the preceding year, show an increase of $42,656.74. The gross working expenses amounted to $7,599,958.57, an increase of $1,125,824.37.

The net loss on the operations of the year was $972,703.06.

The Intercolonial produced a loss of $900,750.61; the Windsor Branch (one-third of total earnings), a profit of $29,352.96, and the Prince Edward Island a loss of $101,305.41.

The above figures include rental, $140,000, paid for the extension of the Intercolonial into Montreal.

INTERCOLONIAL RAILWAY.

On March 1, 1898, the operations of the Intercolonial were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169·81 miles to the operation of the government

line; its length being now 1,320·92 miles, as against 1,314·67 miles in the previous year, the addition being due to the completion of the Rivière Ouelle Branch.

The leasing agreement with the Grand Trunk Railway Company, dated February 1, 1898, was confirmed by the Act 62-63 Vict., chap. 5 (1899). Its term extends for a period of ninety-nine years from March 1, 1898; the annual rental being fixed at $140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899), the Drummond County Railway from Chaudière to Ste. Rosalie, together with the branch from St. Léonard to Nicolet was acquired by the Dominion; conveyance being made by a deed dated November 7, 1899.

The accountant of the railway has dealt with the rental paid under the Grand Trunk Railway lease (the only one now remaining), as an addition to the ordinary working expenses, and, in his comparative statement of averages for each year, both with the rental included, and also with the rental omitted. The statements of the general manager, however, are based on figures from which the rental is omitted. This explanation will cover any seeming discrepancy of statement in the matter. The accountant of the department, in his statements (Part II.), includes the rental, and it is also included in my present report.

CAPITAL ACCOUNT.

During the fiscal year there was an addition of $1,880,856.60 to the capital expenditure, making the total expenditure chargeable to capital on the whole road as amalgamated under the Acts 54-55 Vic., chap. 50 (1891) and 62-63 Vic., chaps. 5 and 6 (1899), up to July 1, 1904, $72,735,935.80.

The additions made during the past fiscal year included (omitting cents) the following items: For increased accommodation at Sydney, $25,682; for strengthening bridges, $164,928; for increased accommodation at Lévis, $62,107; for air brakes to freight cars, $24,990; to exchange draw bars on freight cars, $46,000; for rolling stock, $643,020; new superstructure for the Restigouche bridge, $95,106; for extension to Moncton repair shop, $26,377; for engine house, car shop, &c., at Rivière du Loup, $48,805; for engine house, &c., at Chaudière Junction, $48,475; for increased accommodation at St. John, $67,355, at Halifax, $105,762, at Moncton, $95,198, at Ste. Flavie, $27,472; for a spur line from railway to wharf at Rivière Ouelle, $32,369; for double-tracking parts of line, $85,138, and for steel rails and fastenings, $50,356. Details will be found in the reports of the general manager and other officers in Part I. of the Appendices.

REVENUE ACCOUNT.

The gross earnings of the year amounted to $6,339,231.43, an increase of $14,907.71, and the working expenses to $7,239,982.04 (including $140,000 paid as rental for the extension into Montreal), being an increase of $1,043,328.85 in comparison with the previous year, when the same rental was paid. The expenditure exceeded the earnings by $900,750.61. There was an increased expenditure of $440,761.50 for locomotive power; of $369,070.28 for car expenses; of $105,322.89 for

maintenance of way and works; of $88,726.18 for station expenses, and of $40,563.02 for general charges.

Comparing the earnings with those of the previous year, the passenger traffic produced $2,021,568.40, or 31·89 per cent of the gross earnings, an increase of $93,651.43; the freight traffic amounted to $4,041,122.48, or 63·75 per cent of the gross earnings, a decrease of $87,132.52, and the carriage of mail and express freight produced $276,540.55, or 4·36 per cent of the gross earnings, an increase of $8,388.80. The earnings per mile of railway were $4,799.10, a decrease of $11.46.

The working expenses per mile of railway were $5,481.02, an increase of $767.56, and per train mile 111·32 cents, and increase of 13·67 cents. These figures include the rental of the leased extension to Montreal. The mileage of the railway was 1,320·92 miles against 1314·67 miles the preceding year.

GENERAL OBSERVATIONS.

The traffic of the road during the past year in comparison with that of the preceding year is indicated by the following statement of the principal items comprised in it:—

The number of passengers carried was 2,663,156, an increase of 258,926. Of this increase 192,830 were local and 66,096 through passengers. Of freight, 2,664,149 tons, a decrease of 126,588 tons, the local freight having fallen off by 116,732 tons and the through freight by 9,856 tons.

Of flour and meal, 1,607,050 barrels were carried, an increase of 85,510, and of grain 2,788,772 bushels, a decrease of 603,480. Lumber showed an increase of 6,148,214 superficial feet, the quantity carried being 465,379,803 feet. Of live stock, 113,006 head were carried, being a decrease of 14,054 head. 694,761 tons of coal, a decrease of 55,315 tons, were carried, and there was a decrease of 1,394 tons of cordwood, the quantity being 53,606 cords. Of manufactured goods 522,410 tons, a decrease of 68,116 tons, were carried. There was an increase of 700,938 tons in the quantity, 1,194,163 tons, of other articles transported, which included 44,920 tons of refined sugar, an increase of 13,809 tons, though raw sugar showed a decrease of 8,604 tons; only 8,727 tons being moved; 11,068 tons of fresh fish, an increase of 779 tons; salt fish, of which 8,996 tons were carried, showing a decrease of 2,499 tons.

Ocean borne goods, other than deals, to and from Europe via Halifax, aggregated 174,520 tons, an increase of 35,889 tons. Of this 146,070 tons were local traffic.

The winter was very severe and stormy, and the consequent expenditure was considerably increased, being $130,652.35, an increase of $41,171.65.

One hundred and sixty-two miles of the road were relaid with 80-pound steel rails and 44 miles with 67-pound rails.

One hundred and twelve additional freight cars were fitted with the Westinghouse air brakes, making the total number so fitted 4,426.

The rolling stock at the close of the fiscal year comprised, amongst other items, 302 locomotives, 31 first and 31 second-class sleepers, 5 parlour and 7 dining cars, 117 first and 93 second cleass passenger cars, 5,486 box cars, 84 refrigerator cars, 2,686 platform, 999 hopper, 542 coal and 123 stock cars, 49 snow ploughs and 22 flangers.

The value of stores on hand at the close of the fiscal year, including fuel and steel rails and fastenings, was $1,423,356.55.

The railway works and rolling stock have been maintained at a satisfactory standard of efficiency.

Details of works executed and various financial and other items of information will be found in the appendices hereto.

WINDSOR BRANCH.

The road is 32 miles in length. It extends from Windsor Junction, on the Intercolonial Railway, to Windsor.

The railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The Company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the government taking the remaining one-third, and assuming all costs of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends, for a further term of 21 years, arrangements similar to those made in 1871.

All charges for superintendence and supervision of maintenance of works are borne by the government; the duty of supervision is performed by the chief officers of the Intercolonial Railway.

The gross earnings of the government (one-third of gross receipts) credited to this branch, amounted to $53,634.05, an increase of $11,073.24. The expenses of maintenance amounted to $24,281.09, an increase of $6,437.90, leaving a profit to the government of $29,352.96.

The road has been maintained in good order. Details will be found in the appendices.

PRINCE EDWARD ISLAND RAILWAY.

The mileage of this railway in operation was the same as in the previous year, namely, 209 miles.

CAPITAL ACCOUNT.

The total cost of the road and equipment chargeable to capital account at the close of the past fiscal year was $6,128,116.80; there being an addition during the year of $698,877.47; the principal items being an expenditure of $226,248.22 on the branch to Murray Harbour, and $418,982.76 for a combined railway and carriage bridge over

the River Hillsborough, Charlottetown; $10,895.74 was expended on the straightening of the line at Curtis creek, and $21,580.30 on air brakes and signals.

REVENUE ACCOUNT.

The gross earnings amounted to $234,390.03, and the working expenses to $335,695.44, the expenditure in excess being $101,305.41.

Compared with the previous year, the gross earnings show an increase of $16,675.79, and the working expenses an increase of $76,057.62. The railway carried 224,567 passengers, an increase of 19,302, producing $102,378.49, an increase of $7,141.37. Of freight there were carried 86,286 tons, an increase of 5,704 tons, producing $114,061.59, an increase of $7,541.87. The earnings from mails and sundries amounted to $17,049.95, an increase of $1,992.55.

The train mileage (the number of miles run by trains) was 310,785, an increase of 19,522 miles.

The cost per train mile was 108·01 cents, an increase of 18·87 cents; and the cost per mile of railway $1,606.09, an increase of $443.10.

The value of stores on hand at the close of the fiscal year, including fuel and rails, was $99,809.77.

The road, with its buildings and rolling stock, has been efficiently maintained.

Details of operation will be found in the appendices (Part I), including the reports of the superintendent and other officers.

SURVEY FOR A RAILWAY TO GIVE ACCESS TO THE YUKON DISTRICT.

In the annual report for the fiscal year 1900-01, will be found a full report from the engineer in charge on this subject and also (on p. xv) a summary of the work done and the conclusions arrived at. Previous reports were printed in the annual reports for the years 1898-99 and 1899-1900.

NATIONAL TRANSCONTINENTAL RAILWAY.

Under an agreement, dated July 29, 1903, ratified by the Dominion Act of that year, chap. 71, and under a modifying agreement, dated February 18, 1904, ratified by the Act of that year, chap. 24, the Grand Trunk Pacific Railway Company, a company incorporated by the Act of 1903, chap. 122, have agreed with His Majesty in respect of the construction of a line of railway, wholly upon Canadian territory, between the city of Moncton, in the province of New Brunswick, and the navigable waters of the Pacific ocean, at or near Port Simpson, or some other port in British Columbia, as may be agreed upon. The railway is to be composed of two divisions, namely, the eastern division, between Moncton and Quebec, thence westerly through the northern part of the provinces of Quebec and Ontario, and through the province of Manitoba to the city of Winnipeg, and the western division between Winnipeg, or some point on the said eastern division and the Pacific ocean. The eastern division

is to be constructed by the government under four commissioners to be appointed by the Governor in Council, and thereafter leased to and maintained and operated by the company, who undertake to construct at their own cost and to maintain and operate the western division. The lease of the eastern division is to be for a period of 50 years, at a rental of three per cent per annum upon the cost of its construction; the first seven years of the term to be free of rent; both divisions are to be equipped by the company, the first equipment to be of a value not less than $20,000,000.

By way of assistance to the company in the construction of the western division, it is provided that the government shall guarantee payment of the principal and interest of an issue of bonds to be made by the company for an amount sufficient to produce a sum equal to 75 per cent of the cost of its construction, such amount not to exceed $13,000 per mile in respect of the prairie section from Winnipeg to the eastern limit of the Rocky mountains (such limit to be established by the Chief Engineer of the company and the Chief Engineer of the government as the result of actual surveys to be made).

The several expenditures to be made under these Acts and agreements are to be so made from appropriations by parliament for the purpose, and on the recommendation of the Minister of Railways and Canals, to whom accounts of all receipts, expenditures and liabilities are to be furnished monthly. The board are to furnish annually a report to the Governor in Council, through the Minister of Railways and Canals, showing the receipts and expenditures of the year, and other information as to the railway, which report is to be submitted to parliament.

The Board of Commissioners has been duly appointed by Order in Council, together with the necessary officers, and is established with its headquarters in the city of Ottawa. A number of survey parties have been sent out, both by the company and by the government.

RAILWAY SUBSIDIES.

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been fully earned and paid prior to July 1, 1903.

A tabulated statement of payments will be found in Part II., and a list of subsidy agreements entered into during the fiscal year in Part IV.

The several subsidy Acts passed in each year from 1882 will be found in Part III. No subsidies were authorized in the session of 1895, 1896, 1898 and 1902.

Information has been brought down to the end of the fiscal year 1903-1904, only, but, in supplement, the following list shows also the additional contracts entered into, and the payments made, between that date and December, 1904.

SUBSIDY CONTRACTS DURING 1903-1904 TO JUNE 30, 1904.

Bay of Quinté Railway Company.—Extension of railway from a point near Actinolite to a point in township of Marmora, Hastings county, 20 miles; contract dated January 23, 1904.

Beersville Coal Railway Company.—From Adamsville to a point near Brown's Landing or Beersville, 7 miles; contract dated June 24, 1904.

Canadian Northern Railway Company.—From Grandview to Edmonton, 620 miles; and Prince Albert Branch, 100 miles east from Prince Albert; contract dated July 29, 1903.

Canadian Northern Railway Company.—From a point on line of Winnipeg Great Northern Railway north of Swan River to Prince Albert, N.W.T., 100 miles; contract dated December 7, 1903.

Canadian Northern Railway.—In further extension north of Swan River towards Prince Albert, 100 miles; contract dated December 7, 1903,

Canadian Pacific Railway Company.—From a point on main line between Moosomin and Elkhorn to neighbourhood of Pheasant Hills, 136 miles; contract dated January 14, 1904.

Chateauguay and Northern Railway Company.—From a point on main line near l'Epiphanie to village of Rawdon, 16 miles; contract dated December 12, 1903.

Canadian Bridge Company *et al.*—St. Francis River bridge; contract dated December 21, 1903.

Canadian Bridge Company *et al.*—For completion of foundation and approaches of St. Francis River bridge; contract dated December 21, 1903.

Central Counties Railway Company.—From Hawkesbury, Ont., to South Indian, 35 miles; contract dated December 26, 1903.

Edmonton, Yukon and Pacific Railway Company.—From Strathcona to Edmonton, 50 miles; contract dated June 24, 1904.

Grand Trunk Pacific Railway Company.—From Winnipeg to Port Simpson (W. Division), &c.; contract dated July 29, 1903.

Grand Trunk Pacific Railway Company.—From Winnipeg to Port Simpson (W. Division), &c.; contract dated February 18, 1904.

Halifax and South-Western Railway Company.—From Halifax to Mahone Bay, 68 miles; contract dated November 9, 1903.

Halifax and South-Western Railway Company.—From Bridgewater towards Barrington Passage; also a line to Barrington Passage, in addition, 77 and 35 miles; contract dated November 9, 1903.

Halifax and South-Western Railway Company.—From New Germany to Caledonia, 22 miles; contract dated November 9, 1903.

Halifax and South-Western Railway Company.—From Caledonia to Liverpool, 29 miles; contract dated November 9, 1903.

International Railway Company of New Brunswick.—For extension of line to a point on St. John River between Grand Falls and Edmundston, 33 miles; contract dated January 15, 1904.

Inverness Railway and Coal Company.—From Cheticamp to point between Broad Cove and Point Tupper, 37 miles; contract dated November 9, 1903.

Inverness Railway and Coal Company.—From Point Tupper to Broad Cove, 8 miles; contract dated November 9, 1903.

Lindsay, Bobcaygeon and Pontypool Railway Company.—Between Buckton and Bobcaygeon, 40 miles; contract dated March 14, 1904.

Middleton and Victoria Beach Railway Company.—From Victoria Beach to Middleton, 41 miles; contract dated December 28, 1903.

Nova Scotia Eastern Railway Company.—(1) New Glasgow to Cross Roads, 116 miles ; (2) Dartmouth to Melrose through Musquodoboit Valley, 120 miles; total, 236 miles; contract dated April 15, 1904.

Ottawa, Northern and Western Railway Company.—From Aylmer to Hull, Que., 9 miles; contract dated July 10, 1903.

Ottawa, Northern and Western Railway Company.—From end of 62nd mile towards Desert, 20 miles; contract dated August 25, 1903.

Ottawa, Northern and Western Railway Company.—Unearned balance of subsidy upon the 62 miles from Hull towards Desert; contract dated August 25, 1903.

Quebec Bridge and Railway Company.—Quebec Bridge approaches and terminals; contract dated October 19, 1903.

Restigouche and Western Railway Company.—From Campbellton, on Intercolonial Railway, towards Grand Falls, 20 miles; contract dated February 17, 1904.

South Shore Railway Company (Quebec).—St. Francis River Bridge; contract dated December 21, 1903.

South Shore Railway Company (Quebec).—For completion of foundation and approaches of St. Francis River Bridge; contract dated December 21, 1903.

St. Mary's River Railway Company.—From Spring Coulee to Cardston, 16 miles, and from a point on this line near irrigation canal, 16 miles, a total of 32 miles; contract dated March 14, 1904.

SUBSIDIES PAID DURING THE FISCAL YEAR ENDED JUNE 30, 1904.

Atlantic and Lake Superior Railway, Quebec	$ 37,000 00
Atlantic and North-western Railway	186,600 00
Bay of Quinté Railway, Ontario	49,920 00
Canadian Northern Railway Company, Ontario	374,156 00
Canadian Pacific Railway (Kootenay and Arrowhead branch)	17,842 85
Canadian Pacific Railway (Pheasant Hills branch)	378,624 00
Canadian Pacific Railway (Waskada branch)	13,520 00
Cape Breton Railway Extension Company, N.S.	117,120 00
Chateauguay and Northern Railway, Quebec	191,595 00
Coast Line of Nova Scotia, now Halifax and Yarmouth Railway	9,600 00
Halifax and South-western Railway, N.S.	185,422 00
Inverness and Richmond Railway, N.S. (now Inverness Railway and Coal Company)	57,170 44
Midland Railway Company, Nova Scotia	1,750 00
New Brunswick Coal and Railway, N.B.	48,000 00
Northern Colonization Railway, Quebec	58,384 00
Ottawa, Northern and Western Railway, Quebec (formerly Ottawa and Gatineau Railway)	118,368 00
Restigouche and Western Railway, N.B. (now International)	30,208 00
Schomburg and Aurora Railway, Ontario	46,144 00
South Shore Railway, Quebec	80,494 16
St. Mary's River Railway Company, N. W. T.	40,960 00
Tilsonburg, Lake Erie and Pacific Railway, Ontario	4,000 00
	$2,046,878 45

ADDITIONAL SUBSIDY CONTRACTS FROM JULY 1, 1904, TO DECEMBER 31, 1904.

Bracebridge and Trading Lake Railway Company.—From Bracebridge, in Muskoka, to a point near Baysville, Ont., 15 miles; contract dated October 7, 1904.

Bruce Mines and Algoma Railway Company.—From Gordon Lake Station to Rock Lake, 6 miles; contract dated October 20, 1904.

Cape Breton Railway Company, Limited.—From St. Peter's to Louisburg, 50 miles; contract dated October 5, 1904.

Chateauguay and Northern Railway Company.—Balance of subsidy for bridge from Bout de l'Ile to Charlemagne; contract dated November 12, 1904.

Chateauguay and Northern Railway Company.—Additional grant for Bout de l'Ile bridge; contract dated November 12, 1904.

James' Bay Railway Company.—From Toronto to Sudbury, Ont., 265 miles; contract dated September 8, 1904.

Kootenay and Arrowhead Railway Company.—From Lardo towards Upper Arrow Lake, in lieu of subsidy granted by chap. 7, 1901, section 2, item 28, 30 miles; contract dated October 20, 1904.

Minudie Coal Company, Limited.—From a point on Joggins Railway to village of Minudie, 6 miles; contract dated October 28, 1904.

Quebec and Lake St. John Railway Company.—From La Tuque, on St. Maurice River, to a point on Lake St. John Railway near River Jeannotte, 35 miles; contract dated October 12, 1904.

ADDITIONAL SUBSIDY PAYMENTS FROM JULY 1, 1904, TO DECEMBER 31, 1904.

Algoma Central and Hudson Bay Railway	$331,378 76
Atlantic and Lake Superior Railway	43,131 85
Atlantic and North-west Railway	93,300 00
Canadian Pacific Railway (Kootenay and Arrowhead Branch)	4,176 15
Lindsay, Bobcaygeon and Pontypool Railway	123,840 00
	$595,826 76

GOVERNMENT ACTION AS TO SUBSIDIZED RAILWAYS.

(The numbers within brackets after the title of the company refer to the lists of railways for which subsidies have been authorized by parliament, year by year, from the commencement of the system of railway subsidy in 1882, in the appendices hereto.)

With regard to the several lines of railway subsidized by the Dominion, the following represents the action taken and the progress made, in so far as the Dominion government is concerned; only those lines and companies being mentioned as to which definite steps, other than merely preliminary, have been taken towards securing the subsidy.

The following shows the aggregate of the payments made on subsidy account:—

For the fiscal year	1883-84,	ended on June 30,	1884	$ 208,000 00
"	1884-85	"	1885	403,245 00
"	1885-86	"	1886	2,171,249 00
"	1886-87	"	1887	1,406,533 00
"	1887-88	"	1888	1,027,041 92
"	1888-89	"	1889	846,721 83
"	1889-90	"	1890	1,678,195 72*
"	1890-91	"	1891	1,265,705 87*
"	1891-92	"	1892	1,248,215 93*
"	1892-93	"	1893	811,394 07*
"	1893-94	"	1894	1,229,885 10*
"	1894-95	"	1895	1,310,549 10*
"	1895-96	"	1896	834,745 49*
"	1896-97	"	1897	416,955 30*
"	1897-98	"	1898	1,414,934 78*
"	1898-99	"	1899	3,201,220 05*
"	1899-1900	"	1900	725,720 35*
"	1900-01	"	1901	2,512,328 86*
"	1901-02	"	1902	2,093,939 00*
"	1902-03	"	1903	1,463,222 34*
"	1903-04	"	1904	2,046,878 45*
				$28,316,681 16†

To the above there have to be added the following exceptional subsidies:—

The Canada Central Railway, paid between 1878-83...	$ 1,525,250 00
The Canadian Pacific Railway extension from St. Martin's Junction to Quebec, paid in 1885.....	1,500,000 00
Total subsidies paid from 'Consolidated Fund' up to June 30, 1902....	$31,341,931 16†
The main line subsidy to the Canadian Pacific Railway was paid from 'Capital,' amounting to..	25,000,000 00
Total paid as subsidies....	$56,341,931 16†

The above does not include the amount $2,394,000, due to the province of Quebec for the railway between Ottawa and Quebec, which amount has been transferred to the public debt, and on which interest at 5 per cent is paid, amounting to $119,700 a year. (See note on page 48 of the accountant's statement, Part II.)

* In these amounts the subsidy of $186,600 a year payable to the Atlantic and North-west Railway Company, for 20 years from July 1, 1889, is included. Payment is made by the Finance Department.

† There was an error in the corresponding figures in last year's report, which is now rectified.

NOTE.—The names, locations and mileage of the several railways of the Dominion, together with those of the branch lines composing their system, will be found in the 'Railway Statistics,' Appendix No. VI. of the present report.

Albert Southern Railway Company.

(See Annual Report of 1891-92.)

Algoma Central and Hudson Bay Railway Company.

(See Nos. 437 and 479.)

This company was incorporated as 'The Algoma Central Railway Company' by the Act 62-63 Vic., chap. 50 (1899), with powers to construct a line of railway from the town of Sault Ste. Marie to a point on the Canadian Pacific Railway at or near Dalton Station, and thence south-westerly to Michipicoten Harbour, Lake Superior.

These powers were amended by the Act 63-64 Vic., chap. 49 (1900), and the company were empowered to build a railway from Sault Ste. Marie to a point between the rivers Magpie and Michipicoten, and thence to the main line of the Canadian Pacific Railway, and southerly to Michipicoten Harbour.

By the Act 1 Ed. VII., chap. 46 (1901), the name of the company was changed as above, and they were empowered to build an extension of their railway from a point on the Canadian Pacific Railway northerly to some point on James Bay, not further north than Equam river.

By the Railway Subsidy Act of 1899, 62-63 Vic., chap. 7, item 23, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized for 40 miles of a railway from Sault Ste. Marie towards Michipicoten river and harbour, and towards the Canadian Pacific Railway.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on September 28, 1901, under authority of orders in council dated May 30 and August 10, 1901.

By the Railway Subsidy Act of 1900, 63-64 Vic., chap. 8, item 4, the grant of a similar subsidy to the company was authorized for an extension of 25 miles from the end of the 40 miles section above mentioned, and also for 25 miles from Michipicoten harbour towards the main line of the Canadian Pacific Railway.

Under authority of an order in council, dated January 6, 1902, a contract was entered into with the company on February 5, 1902, for the work so subsidized.

By the Railway Subsidy Act of 1901, chap. 7, item 20, the grant of a similar subsidy was authorized for a further distance, not exceeding 135 miles, to a point on the Canadian Pacific Railway at or near White River, and a contract was entered into with the company accordingly on October 15, 1902.

During 1902-03 there was paid to the company the sum of $202,912, making the total payments $583,536, up to June 30, 1903.

No further payments were made up to June 30, 1904.

Atlantic and Lake Superior Railway Company.

(See No. 524.)

This company was incorporated by the Act 56 Vic., chap. 39 (1893), with powers to construct or acquire a line of railway from a point at or near Gaspé bay in the province of Quebec, to a point at or near the St. Mary river in the district of Algoma, in the province of Ontario, and was authorized to enter into agreement with certain companies named for the purchase or lease of their railways, in whole or in part, and their franchises, between the points named.

Agreements were made by the company, and were confirmed by Parliament by the Act 57-58 Vic., chap. 63 (1894), as follows:—

(1) For the purchase of the Baie des Chaleurs Railway Company's railway and appurtenances and their franchises. (2) For the use of a bridge to be constructed across the River St. Lawrence, opposite the city of Montreal, to be built by the Montreal Bridge Company. (3) For the purchase of the Great Eastern Railway between Yamaska and St. Gregoire, in the province of Quebec. (4) For the purchase from the Ottawa Valley Railway Company of their railway between Lachute and St. Andrew's in the province of Quebec, and their franchises. The Act provided that the railways named should be completed within three years, and the bridge within five years.

Difficulties, however, arose; the property of the Atlantic and Lake Superior Railway Company was ultimately vested in trustees of the bondholders, who, by the Act 1 Ed. VII., chap. 48, 1901, were authorized, notwithstanding anything contained in any Act of Parliament, to repair and renew the road-bed and bridges of the railway between Metapedia and Caplin, and to construct the railway from Caplin to a point near Paspebiac; such powers of construction to be exercised before December 31, 1902; also to operate the railway between Metapedia and Paspebiac, the Baie des Chaleurs division.

By the Subsidy Act of 1901, 1 Ed. VII., chap. 7, item 9, the grant of a subsidy was authorized for the 30 miles between Caplin and Paspebiac, namely, of $3,200 a mile, with a further subsidy of 50 per cent of cost in excess of $15,000 a mile; in all, not exceeding $6,400 a mile; the subsidy contract to be made 'with the trustees or receivers under mortgage from the Atlantic and Lake Superior Railway Company.' The Act provided for payment out of the subsidy, 1st, for certain bridge superstructures, the amount being limited to $35,000; 2nd, for the completion of the road-bed; 3rd, towards payment of claims for labour, materials, and supplies in that connection.

Under date July 25, 1901, a subsidy contract was entered into accordingly. The road was completed, and, on inspection, was so reported in June, 1903. The question of the amount of subsidy earned remained to be decided, involving decision as to the actual, necessary and reasonable cost of this 30 miles of railway.

During the past fiscal year payments were made to the extent of $37,000, making a total of $14,153.98 to June 30, 1904. Of this total, $32,153.98 was for bridge superstructures and $72,000 to the trustees for road-bed completion.

It has to be observed that, as stated in the annual report of the department for the year 1894-95, subsidy has been paid to the Baie des Chaleurs Railway Company for the portion of this railway from Metapedia eastwardly towards Paspebiac, 70 miles, to the extent of $620,000.

Atlantic and North-west Railway Company.

(See Annual Report of 1889-1890.)

The full history of this subsidy was shown in the annual report for 1889-90. The company receives an annual subsidy of $186,600 for 20 years. The first payment having been made in 1889-90. The total paid up to June 30, 1904, is $2,799,000. Payment is made by the Department of Finance direct.

Baie des Chaleurs Railway Company.

(See Annual Report of 1895-96.)

(See also Atlantic and Lake Superior Railway Company.)

The Bay of Quinté Railway Company.

(See Nos. 434 and 581.)

This company was incorporated by the Dominion Act of 1881, chap. 46, under the name 'The Bay of Quinte Railway and Navigation Company,' with powers to construct a line of railway from Mill Point, county of Hastings, on the Bay of Quinté, to a point of junction with the Grand Trunk Railway.

By the Act of 1896 it was empowered to amalgamate with the Kingston, Napanee and Western Railway Company (formerly the Napanee, Tamworth and Quebec Railway Company), under the name of the Bay of Quinte Railway Company. Its powers were extended to cover the construction of branch lines, not exceeding 20 miles in length, each to connect with mines and mineral lands, and by the Act of 1900, chap. 50, extensive powers were conferred for development of electrical power, and for mining and timber industries. Their powers of construction were extended to June 14, 1905.

By the Subsidy Act of 1899, chap. 7, item 20, as amended by clause 9 of the Subsidy Act of 1900, chap. 8, the grant of aid was authorized to the extent of $3,200 per mile for 10 miles, for extensions, branches and additions to connect their lines of railway or to connect the said lines or connecting lines with iron or other mines or mineral or wood lands in certain counties named. This was in lieu of part of the balance of subsidy granted to the Kingston, Napanee and Western Railway in 1892.

Under date of December 30, 1902, a subsidy contract was entered into with them accordingly.

By the Subsidy Act of 1899, cap. 7, item 45, the grant of aid to the extent of $3,200 per mile with an addition of 50 per cent on average expenditure in excess of $15,000 per mile, the whole not exceeding $6,400 per mile, was authorized for an extension, not exceeding 2 miles, of the company's line, westerly, from a point at or near Richmond Boundary Road, near Deseronto, and also for an extension from the end of the said two miles, northerly, for a distance not exceeding 3 miles.

Under date of December 30, 1903, a separate contract was entered into with the company for each of these two sections.

During the fiscal year 1902-03 payment has been made of $19,200 for the six miles between Deseronto and Napanee, under the subsidy granted by item 20 of the Act of 1899.

By the Subsidy Act of 1903, chap. 57, item 37, the grant of aid to the extent of $3,200 per mile with an addition of 50 per cent on the average expenditure in excess of $15,000 per mile, the whole not exceeding $6,400 per mile, was authorized for further extension of the company's line of railway, from the northern terminus thereof, commencing from a point at or near Actinolite, thence in a north-westerly direction via the villages of Queensboro' and Bannockburn, to a point in the township of Marmora or Lake in Hastings county, not exceeding 20 miles in all.

Under date of January 23, 1904, a subsidy contract was entered into with the company for the construction of this extension.

During the past fiscal year there has been paid $49,920, making the total payments to this company on subsidy account $69,120, up to June 30, 1904; but there had been previously paid to the Kingston, Napanee and Western Railway Company a total of $203,732.80.

Beauharnois Junction Railway Company.

(See Annual Report of 1895-96.)

Beersville Coal and Railway Company.

(See No. 604.)

This company was incorporated by the Act of New Brunswick, 3 Edward VII., chap. 94 (1903), with power to construct a railway from Adamsville on the Intercolonial Railway to a point at or near Brown's Landing or Beersville, and also to carry on the business of coal mining in all its branches, and other privileges in connection therewith.

By the Subsidy Act of 1903, chap. 57, item 60, a subsidy was authorized for 7 miles of the company's railway from Adamsville to Brown's Landing or Beersville, $3,200 a mile, with a further subsidy of 50 per cent on cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile.

The company were admitted to contract on June 24, 1904, the road to be completed by January 1, 1905.

No payments have been made up to June 30, 1904.

Belleville and North Hastings Railway Company.

(See Annual Report of 1888-89.)

Boston and Nova Scotia Coal Company.

(See Annual Report of 1895-96.)

Bracebridge and Trading Lake Railway Company.

This company was incorporated by the Act 63 Vic., chap. 109 (Ontario), with powers to construct a line of railway to be operated by steam or electricity, or partly by steam and partly by electricity, from a point in the town of Bracebridge to some point in the township of McLean, a distance of about fourteen miles, and to construct, extend and operate a continuation or branch of such railway from Bracebridge to some point on Muskoka Lake at or near Beaumaris, in the township of Monck, a distance of about ten miles, all in the district of Muskoka.

By the Railway Subsidy Act of 1900, 63-64 Vic., chap. 8, item 7, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400, was authorized for a railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ont., not exceeding 15 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on December 30, 1902, under authority of Order in Council, dated April 6, 1903.

No payments have been made up to June 30, 1904.

Brockville, Westport and Sault Ste. Marie Railway Company.

(See Annual Report of 1896-97.)

Brantford, Waterloo and Lake Erie Railway Company.

(See Annual Report of 1895-96.)

Bruce Mines and Algoma Railway Company.

(See Annual Report of 1902-03.)

Buctouche and Moncton Railway Company.

(See Annual Report of 1893-94.)

Calgary and Edmonton Railway Company.

(See Annual Report for 1890.)

(Leased to Canadian Pacific Railway.)

Canada Atlantic Railway Company.

(See Annual Report of 1888-89; also see in present report under head of Ottawa, Arnprior and Parry Sound Railway Company.)

Canada Eastern Railway Co. (formerly Northern and Western Railway Company of New Brunswick).

(See Annual Reports of 1894-95 and 1899-1900.)

Canadian Bridge Company.

(See South Shore Railway Company, Quebec.)

Canadian Northern Railway Company.

(See Nos. 446, 493.)

By the Dominion Act 62-63 Vic., chap. 57 (1889), authority was granted for the amalgamation of the Winnipeg Great Northern Railway Company (formerly the Winnipeg and Hudson's Bay Railway and Steamship Company, the name of which was by the Act of 1887, chap. 81, changed to the Winnipeg and Hudson Bay Railway Company), and the Lake Manitoba Railway and Canal Company, under the name of the Canadian Northern Railway Company, and the agreement for such amalgamation was confirmed; authority also was given for the construction of a railway from Prince Albert to Edmonton, also a branch from a point on that line to the Peace river, together with certain other branch lines.

The Dominion Act 1 Ed. VII., chap 52 (1901), confirmed certain agreements for amalgamation of the Manitoba and South-eastern Railway Company and the Ontario and Rainy River Railway Company with the above company; it also granted authority to construct certain lines of railway described.

By the Dominion Act 1 Ed. VII., chap 53 (1901), authority was granted to the above company, to lease, with the option of purchase the Northern Pacific and Manitoba Railway, the Winnipeg Transfer Railway Company, Limited, the Portage and North-western Railway Company, and the Waskada and North-eastern Railway Company.

By the Dominion Subsidy Act 62-63 Vic. (1889), chap 7, item 32, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15.000 a mile, limited in all to $6,400 a mile, was authorized for 100 miles of railway from a point on the Winnipeg Great Northern Railway north of Swan river to Prince Albert, N.W.T.

By the Dominion Subsidy Act 63-64 Vic. (1900), chap 8, item 18, the grant of a similar subsidy for 100 miles of railway in further extension of the company's line from north of Swan river towards Prince Albert, was authorized.

The company having applied, they were admitted to contract under both subsidies, the two agreements being dated December 7, 1903.

The payments made to this company under the aforesaid agreements aggregate the following amounts :—

For the Ontario and Rainy River Railway (see the Annual Report for 1902-03), $1,534,976, all paid prior to June 30, 1903.

For the Prince Albert Branch, $374,156.

The total of the above payments amounts to $1,909,132, up to June 30, 1904.

By the Special Act 3 Ed. VII., chap 7, (1903), assistance was granted for the extension of the company's railway for 620 miles from Grandview, the terminus of their Gilbert Plains branch to Edmonton, and for a distance of 100 miles east of Prince Albert to Prince Albert by guaranteeing the principal and interest at 3 per cent per annum of first mortgage bonds and other securities to the extent of $13,000 a mile, the principal to be payable in 50 years from the passage of the Act.

Under date July 29, 1903, a trust mortgage between the Canadian Northern Railway Company, the British Empire Trust Company, Limited, the National Trust Company, Limited, and His Majesty was executed in pursuance of the provisions of the said Act, the security to be held by the trustees to be a charge on the two lines of railway thereunder to be constructed, with their equipment, buildings and appurtenances, on the balance of the Prince Albert Branch east of Erwood, and on the company's already constructed and operated lines from Port Arthur westwards as enumerated in a schedule attached, with their buildings, equipment and appurtenances.

Under the same date, July 29, 1903, an agreement was made with the company for the construction of the said two lines of railway, accordingly the line from Grandview to Edmonton to be completed by October 1, 1905, and the 100 miles east from Prince Albert by the same date.

Under orders in council of November 5, 1903, and March 10, 1904, authority has been given for the payment out of moneys deposited with the government as proceeds of the company's stock, for that purpose, under the said agreement, of the sum of $1,571,700, for the work executed on the 620 miles between Grandview and Edmonton, and of the sum of $312,000 for work on the 100 miles east from Prince Albert, namely, for 19½ per cent of the estimated cost, $11,341,300 of the work to be done on the 620 miles, and for 24 per cent of the estimated cost, $1,709,115 of the work to be done on the 100 miles.

This represents the position up to June 30, 1904.

For certain portions of the company's lines, under the aforesaid amalgamations, land grants have been authorized (see Winnipeg Great Northern Railway Company

and Manitoba and South-eastern Railway Company in annual report for 1895-96.) These matters are dealt with by the Department of the Interior.

The company further, by virtue of this amalgamation, have an agreement with the government for the transport of men, supplies, materials and mails for 20 years over the portion of their line from Gladstone to a point half way to the River Saskatchewan.

Canadian Pacific Railway Company.

(Pheasant Hills Branch.)

(See No. 616.)

By the Subsidy Act of 1903, Ed. VII., chap 57, item 72, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, but not exceeding in all $6,400 a mile, was authorized for a railway from a point on the main line of the Canadian Pacific Railway between Moosomin and Elkhorn, northwesterly to a point in the neighbourhood of the Pheasant Hills, not exceeding 136 miles.

The company having applied, a contract was entered into with them on January 14, 1904, under authority or orders in council of November 17, 1903, and January 12, 1904.

During the past fiscal year, subsidy was paid for this work to the extent of $378,624, the total paid up to June 30, 1904.

Canadian Pacific Railway Company.

(Revelstoke to Arrow Lake.)

(See Annual Report for 1896-97.)

Canadian Pacific Railway Company.

(Pipestone Branch—Antler Station to Moose Mountain.)

(See Annual Report for 1901-02.)

Canadian Pacific Railway Company.

(Crow's Nest Pass Railway.)

(See Annual Report for 1902-03.)

Canadian Pacific Railway Company.

(Waskada Branch.)

(See No. 494.)

By the Railway Subsidy Act of 1900, 62-64 Vic., chap. 8, item 19, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a

mile, but not exceeding in all $6,400 a mile, was authorized for a railway from the westerly end of the Waskada branch of the Canadian Pacific Railway, Manitoba, for 20 miles further.

That company having applied for the said subsidy, a contract was entered into with them for the work on December 28, 1901, under authority of orders in council, dated July 6, September 11, October 3, and November 30, 1901. No portion of the subsidy was paid up to June 30, 1902.

During the past fiscal year, subsidy was paid for this work to the extent of $13,520, making the total payments up to June 30, 1904, $64,000.

Canadian Pacific Railway Company.

(Dyment Branch.)

(See Annual Report for 1902-03.)

Canadian Pacific Railway Company.

(West Selkirk—Lake Winnipeg Branch.)

(See Annual Report for 1902-03.)

Cap de la Madeleine Railway Company.

(See Annual Report of 1896-97.)

Cape Breton Railway Extension Company, Limited.

(See Annual Report of 1895-96.)

(See No. 420.)

This company was incorporated by 62 Vic., chap. 126 (1899), of the Acts of Nova Scotia, with powers to construct a railway between Canso and Louisbourg and to construct a bridge or tunnel over or under the Straits of Canso, or to operate a ferry.

By the Nova Scotia Act of 1902, chap. 190, it was further empowered to build branches from any point on its main line or branches to any other point in the county of Cape Breton.

By the Subsidy Act of 1899, 62-63 Vic., chap. 7, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on the average cost in excess of $15,000 a mile, in all not exceeding $6,400 a mile, was authorized in aid of a railway from Port Hawkesbury, on the Strait of Canso, N.S., to St. Peter's, 30 miles.

The above company, having applied, were admitted to contract for work on September 15, 1900. During the past fiscal year payments have been made to the extent of $117,120, making the total payments up to June 30, 1904, $182,400.

Central Counties Railway Company.

(See No. 574.)

This company was originally incorporated by the Dominion Act 50-51 Vic., chap. 82, under the name of the Prescott County Railway, with powers to construct and operate a railway from a point in or near the village of Hawkesbury, in the county of Prescott, to a point on the line of the Ontario and Quebec Railway in the county of Soulanges, in the province of Quebec, and to a point on the line of the Canada Atlantic Railway, in the county of Glengarry, and to the River St. Lawrence, in or near the town of Cornwall, with a branch to Caledonia Springs.

By the Dominion Act 52 Vic., chap. 80, the name of the company was changed to the above, and power granted to construct a bridge across the Ottawa river. By a further Dominion Act, 2 Edward VII., chap. 53, power was granted for the extension of the railway from Hawkesbury to South Indian.

This railway has been leased to, and is now operated by, the Canada Atlantic Railway Company.

By the Dominion Subsidy Act of 1903, 3 Edward VII., chap. 57, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for 35 miles, and has been granted to this company, in lieu of the subsidy authorized by item 22 of sec. 2 of chap. 7 of 1899.

Application having been made, the company was admitted to contract for this work on December 26, 1903, under authority of the Order in Council of December 12, 1903.

No payments have been made up to June 30, 1904.

Central Ontario Railway Company.

(See Annual Report for 1900-01.)

Central Railway Company of New Brunswick.

(See Annual Report for 1902-03.)

Chateauguay and Northern Railway Company.

(See Nos. 507, 508, 509, 599.)

This company was incorporated by the Quebec Act of 1895 (1), chap. 64, its powers of construction being modified by the Act chap. 75 of 1896.

By the Dominion Subsidy Act of 1900, 63-64 Vic., chap. 8, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for 42 miles of a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway in or near the town of Joliette, with a spur into the town.

The company were admitted to contract for this work on January 19, 1901.

On the same date they were admitted to contract for two other works, specially subsidized by the same Act, viz., for a railway, vehicular, and foot-passenger bridge from Bout de L'Isle to Charlemagne, at the junction of the Rivers Ottawa and St. Lawrence, $150,000, and for a bridge across the Lac Ouareau river, $15,000. No portion of these three subsidies has been paid up to June 30, 1903.

By the Dominion Subsidy Act of 1903, chap. 57, item 55, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 16 miles of a railway from a point on its main line at or near L'Epiphanie, via the parish of St. Jacques de l'Achigan to the village of Rawdon.

The company were admitted to contract for this work on December 12, 1903.

By the Dominion Subsidy Act of 1903, chap. 57, sec. 3, sub-sec. 4, a subsidy was authorized for the Bout de L'Ile bridge of $50,000, in addition to that granted by item 33 of section 2, of chap. 8, of 1900.

During the past fiscal year, payment of subsidy was made to the extent of $191,595, being the total of the payments made to the company up to June 30, 1904.

Chatham Branch Railway Company.

(See Annual Report of 1893-94.)

Chignecto Marine Transport Company.

(See Annual Report for 1894-95.)

Coast Railway Company of Nova Scotia.

(Name changed to Halifax and Yarmouth Railway Company by Nova Scotia Statute of 1899, chap 128.)

(See Nos. 403, 520.)

This company was incorporated by the Provincial Act of Nova Scotia, 56 Vic., chap. 154 (1893), to build a line of railway from Yarmouth to Lockeport; a subsequent Act, 59 Vic., chap. 103 (1896), extending its powers.

By the Dominion Subsidy Act, 60-61 Vic., chap. 4 (1897), the grant of a subsidy to this company for 61 miles of their railway from Yarmouth to Port Clyde was authorized, the amount being $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile.

The company were admitted to contract on August 26, 1897, the road to be completed by September 1, 1899.

During the year 1897-98 they were paid the sum of $90,400.

By the Subsidy Act of 1901, chap 7, item 5, the grant of aid was authorized for a line of railway from Pubnico, N.S., to Port Clyde, or Clyde river, $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, for 31 miles.

This was in lieu of the unexpended balance of the subsidy granted in 1897.

The company having applied were admitted to contract on March 1, 1903.

During the past fiscal year payment of subsidy was made to the extent of $9,600, making with subsidy previously paid, a total of $150,400 up to June 30, 1904.

Compagnie du Chemin de fer de Colonisation du Nord.

(See No. 451.)

This company was incorporated by the Dominion Act 62-63 Vic., chap. 62 (1899), with powers to construct and operate a railway from a point in or near Labelle, in the county of Labelle, Quebec, and passing within a mile of the parish church of L'Annonciation, in the township of Marchand, in the said county, and within a mile of the parish church in the vilage of Nomininguc, in the township of Loranger, and within a mile of the village of Rapide de L'Orignal, in the townships of Robertson and Campbell, and thence in a westerly direction to a point at or near Lake Temiscamingue in the county of Pontiac.

By the Railway Subsidy Act 62-63 Vic., chap. 7 (1899), item 37, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on the average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized for a railway for a distance not exceeding 22 miles from Labelle in a northwesterly direction, to Nomininguc, via Notre Dame de l'Annonciation.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on July 8, 1902.

During the past fiscal year payment has been made to the extent of $53,384, being the total up to June 30, 1904.

Cobourg, Northumberland and Pacific Railway Company.

(See Annual Report for 1900-01.)

Columbia and Kootenay Railway and Navigation Company.

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report for 1891-92.)

Cornwallis Valley Railway Company.

(See Annual Report for 1891-92.)

Cumberland Railway and Coal Company.

(See Annual Report for 1894-95.)

Dominion Atlantic Railway Company.

(See Western Counties Railway Company.)

Dominion Eastern Railway Company.

(See Annual Report for 1900-01.)

Dominion Lime Company.

(See Annual Report for 1888-89.)

Dominion Coal Company.

(See Annual Report for 1895-96.)

Drummond County Railway Company.

(See Annual Report of 1900-01.)

East Richelieu Valley Railway Company.

(See Annual Report of 1888-89.)

Edmonton, Yukon and Pacific Railway Company.

(See Nos. 455, 572.)

This company was incorporated by the Dominion Act of 1896, 59 Vic., chap 71, under the name of the Edmonton District Railway, with powers to construct and operate a railway from some point within the town of Edmonton to a point in South Edmonton on the Calgary and Edmonton Railway and to connect therewith ; also from some point within the town of Edmonton, via the village of St. Albert, to a point on the Athabaska river, at or near Fort Assiniboine, with a branch to Stony Plains; also from some point within the town of Edmonton to a point at or near Fort Saskatchewan, together with a branch to a point on Sturgeon river. Other powers were granted of a general commercial character.

By the Dominion Act of 1898, 61 Vic., chap 63, the company was empowered to extend their line of railway from the Athabaska to the navigable waters of Pelly river.

By the Dominion Act of 1889, 62-63 Vic., chap 64, the name of the company was changed to the above, with powers to extend the railway via the Yellow Head Pass or the Peace River Pass, to a point in British Columbia, or to connect with the railway which the British Pacific Railway Company is authorized to construct, and also to construct and operate a branch line to some point on the Yukon river.

By the Dominion Subsidy Act of 1903, 3 Edw. VII., chap. 57, item 28, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 50 miles of a railway from the town of Strathcona to Edmonton, and thence westerly towards the Yellow Head Pass.

The company having applied for this subsidy, a contract was entered into with them, accordingly on June 24, 1904, the road to be completed by December, 1906.

No payments have been made up to June 30, 1904.

Elgin, Petitcodiac and Havelock Railway Company.

(See Annual Reports for 1885-86 and 1890-91.)

Erie and Huron Railway Company.

(See Annual Report for 1886-87.)

Esquimalt and Nanaimo Railway Company.

(See Annual Report for 1886-87.)

Fredericton and St. Mary's Bridge Company.

(See Annual Report of 1888-89.)

Grand Trunk, Georgian Bay and Lake Erie Railway Company.

(See Annual Report for 1893-94.)

Grand Trunk Railway Company.

(See Annual Report of 1900-01.)

Great Eastern Railway Company.

(See Annual Report for 1896-97.)

Great Northern Railway of Canada (formerly the Great Northern Railway Company).

(See Annual Report for 1902-03.)

Gulf Shore Railway Company of New Brunswick.

(See Annual Report for 1899-1900.)

Guelph Junction Railway Company.

(See Annual Report of 1888-89.)

Halifax and South-western Railway Company.

(See Nos. 567, 619.)

This company was declared to be incorporated under date of the 21st day of August, A.D. 1901, by the Act of the province of Nova Scotia, 2 Edward VII., chap. 1 (1902), for the construction and operation of a railway from a point on the Intercolonial Railway at or near Halifax to Barrington Passage, and also from a junction with the Central Railway, at or near New Germany, to Caledonia Corners.

By the Dominion Subsidy Act of 1903, chap. 57, items 23 and 75, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for lines of railway (*a*) from a point at or near Halifax to a point on the Central Railway at or near Mahone Bay, 68 miles; (*b*) from a point on the Central Railway at or near Bridgewater towards Barrington Passage, 77 miles, and an addition to and continuation of the same, 35 miles; (*c*) from a point at or near New Germany on the Central Railway to a point at or near Caledonia, 22 miles; (*d*) and from a point at or near Caledonia to Liverpool, 29 miles.

The company was admitted to contract on November 9, 1903 ; the time for completion being fixed as August 1, 1905.

During the past fiscal year payments have been made to the extent of $185,422, this being the total paid up to June 30, 1904.

Halifax and Yarmouth Railway Company.

(Formerly the Coast Railway Company of Nova Scotia, which see.)

(Name changed by Nova Scotia Statute of 1899, Chap. 128.)

(See Annual Report for 1902-03.)

Harvey Branch Railway Company.

(See Annual Report of 1889-90.)

Hereford Railway Company (formerly Hereford Branch Railway Company).

(See Annual Report of 1891-92.)

International Railway Company.

(See Annual Reports of 1887-88 and 1889-90.)

International Railway Company of New Brunswick.

(See Restigouche and Western Railway Company.)

Inverness Railway and Coal Company.

(Name changed from Inverness and Richmond Railway Company by the Act of the province of Nova Scotia, 2 Edward VII., chap. 162 of 1902.)

(See Nos. 208, 251, 357, 400, 523 and 568.)

This company was incorporated by the Act of the province of Nova Scotia, 50 Vic., chap. 60 (1887), with powers for the construction of a line of railway between Hawkesbury and a point in the district of Margaree. By the Act of 1888, chap. 79, the location of the line was authorized as from Port Hawkesbury, through Port Hastings, Judique, Port Hood, Mabou and Margaree, to a point at Eastern Harbour, Cheticamp.

By the Subsidy Act, 57-58 Vic., chap. 4 (1894), assistance to the extent of $80,000 was authorized for 25 miles of railway from Port Hawkesbury towards Cheticamp, and the above company was admitted to contract for the work on November 23, 1894.

By the Subsidy Act of 1897, 60-61 Vic., chap. 4, in lieu of the subsidy granted in 1894, a subsidy of $3,200 a mile with an addition of 50 per cent on expenditure in excess of $15,000 a mile, such subsidy in all not to exceed $6,400 a mile, was authorized for a railway from Port Hawkesbury to Port Hood and Broad Cove, 53 miles, and the company was admitted to contract thereunder on April 29, 1898.

By the Subsidy Act of 1903, chap. 57, item 24, the grant of a subsidy for 30 miles of railway from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, being a revote and in substitution of the subsidy granted by chap. 4 of 1897, was authorized.

The company was admitted to contract on November 9, 1903; the time for completion being fixed as August 1, 1905.

The sum of $57,170.44 was paid during the past fiscal year, making the total payments $368,545.97 up to June 30, 1904.

Irondale, Bancroft and Ottawa Railway Company.

(See Annual Report for 1900-01.)

Joggins Railway Company.

(See Annual Report for 1891-92.)

Kingston, Napanee and Western Railway Company.

(See Napanee, Tamworth and Quebec Railway.)

Kingston and Pembroke Railway Company.

(See Annual Report for 1884-85.)

Kootenay and Arrowhead Railway Company.

(See No. 543.)

This company was incorporated by the Act 1 Ed. VII., chap. 70 (1901), with powers to construct a railway from a point at or near Lardo, near the head of Kootenay lake, to a point at or near Duncan; thence north-westerly to Arrowhead on Arrow lake, B.C., together with such branch lines, none to exceed 30 miles, as may be authorized by the Governor in Council. The company were empowered to lease or sell their works to certain companies named, including the Canadian Pacific Railway Company.

On August 15, 1901, this railway was leased to the Canadian Pacific Railway Company for a term of 999 years. The leasing was approved by an Order in Council of June 29, 1903.

By the Subsidy Act of 1901, chap 7, item 28, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, limited to $6,400 in all, was authorized for a railway from Duncan lake towards Lardo or Arrow lake, B.C., or from Lardo to Arrow lake, not exceeding 30 miles.

The company having applied for this subsidy, a contract was entered into with them for the work on August 26, 1901, under authority of Orders in Council of June 3 and July 6, 1901; the time for completion being fixed as August 1, 1903. The road was built from Lardo to Trout lake, 33 miles, and was inspected in June, 1902, with a view to its being opened for public traffic.

During 1902-03 there was paid to the company the sum of $42,771, this being the total paid up to June 30, 1903.

No further payments were made up to June 30, 1904.

Lake Erie and Detroit River Railway Company.

Formerly 'the Lake Erie, Essex and Detroit Railway Company.' Name changed by Dominion Act, 54-55 Vic., chap. 88 (1891).

(See Annual Report for 1901-02.)

L'Assomption Railway Company.

(See Annual Report of 1886-87.)

Leamington and St. Clair Railway Company.

(See Annual Report of 1888-9.)

Lake Temiscamingue Colonization Railway Company.

(See Annual Report of 1896-7.)

Laurentian Railway Company.

(See St. Lawrence, Lower Laurentian and Saguenay Railway Company.)

Lindsay, Bobcaygeon and Pontypool Railway Company.

(See Nos. 197, 271, 372, 425, 545.)

This company was incorporated by the Dominion Act 53, Vic., chap 55 (1890), with powers to construct a railway from a point at or near Pontypool on the line of the Canadian Pacific Railway, thence via Lindsay to the village of Bobcaygeon. The company were empowered to lease or sell their works to certain companies named, including the Canadian Pacific Railway Company.

The charter originally granted was revived and amended by the Act 55-56 Vic., chap. 78.

By the Subsidy Act of 1903, chap. 57, item 2, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a railway from Burketon to Bobcaygeon, not exceeding 40 miles, in lieu of the subsidy granted by item 11 of section 2 of chap. 7 of 1899.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on March 14, 1904.

No payments have been made up to June 30, 1904.

Lotbinière and Megantic Railway Company.

(See Annual Report of 1896-7.)

Magnetawan River Railway Company.

This company was incorporated by the Act 1 Edward VII. (Ontario), chap. 83 (1901), with powers to construct a railway between a point in or near the village of Burk's Falls, in the district of Parry Sound, and a point on the Magnetawan river, in the said district of Parry Sound, where the said river is navigable for vessels.

By the Railway Subsidy Act, 1 Edward VII., chap. 7 (1901), item 22, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on an average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized for a line of railway from a point on the Grand Trunk Railway at or near Burk's Falls, Ontario, to the Magnetawan river, not exceeding two miles.

The company having applied for this subsidy, a contract was entered into with them accordingly, on March 19, 1903.

During 1902-03 there was paid to the company the sum of $3,552.

No further payments were made up to June 30, 1904.

Manitoulin and North Shore Railway Company.

(See No. 481.)

This company was incorporated by the Dominion Act of 1900, chap. 64, 63-64 Vic., with powers to construct a line of railway from Little Current, Manitoulin

Island, to a point 100 miles northerly, crossing the Canadian Pacific Railway at or near Onaping or Cartier stations; also from a point in or near the township of Drury or Hyman, on its said line, easterly to Sudbury, also from a point at or near Little Current, south-easterly to the south shore of Manitoulin Island, or Fitzwilliam Island, and from a point near Tobermory to Meaford, passing through Wiarton and Owen Sound; also with powers for dock construction, ferry operation, and electric power production.

By the Subsidy Act of 1900, chap. 8, item 6, aid was authorized towards the construction of 66 miles of the company's railway from Little Current to Sudbury; the company to construct a bridge between Little Current and the mainland, with free provision for vehicular and passenger traffic.

By the Act of 1901, section 5, work under the foregoing subsidy was allowed to be carried on in two sections, the first beginning at Victoria Mines and extending to Sudbury and thence to Lake Wahnapitae, not exceeding 33 miles, the second beginning at Little Current and extending to and connecting with the Canadian Pacific Railway at or near Stanley, not exceeding 31 miles.

Under date of May 15, 1902, a contract was entered into with the company under the above subsidy for a railway from Victoria Mines to Sudbury and thence to Lake Wahnapitae.

During the year 1902-03 there was paid to the company the sum of $32,000.

No further payments were made up to June 30, 1904.

Massawippi Valley Railway Company.

(See Annual Report for 1900-01.)

Middleton and Victoria Beach Railway Company.

(See Nos. 503, 536 and 566.)

This company was incorporated by the statute of Nova Scotia, 60 Vic., chap. 82 (1897), as 'the Granville and Victoria Beach Railway and Development Company,' with powers to build a line of railway from some point on the Dominion and Atlantic Railway at or near Bridgetown, through Granville, to some point at or near Victoria Beach on the Annapolis Basin, with approved branches, &c. This Act was revived by the Act of 1899, chap. 129. It was further revived by the Act of 1901, chap. 160, and extended for six years; the name being changed to the 'Middleton and Victoria Beach Company.'

By the Railway Subsidy Act of Canada, 63-64 Vic., chap. 8, item 28, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for 30 miles of a railway from Bridgetown to Victoria Beach, Nova Scotia.

The above company having applied, they were admitted to contract for the work on May 5, 1902, under authority of an Order in Council of April 1, the railway to be completed by December 1, 1903.

By the Subsidy Act of 1901, chap. 7, item 21, a similar subsidy was authorized to be granted for an extension from Bridgetown to Middleton, not exceeding 11 miles, and the company having applied for it, a contract was made with them, accordingly, on May 5, 1902, under authority of an order in council of April 1, the work to be completed by December 1, 1903.

By the Subsidy Act of 1903, chap 57, item 2, a similar subsidy was authorized for 41 miles of railway from Victoria Beach to Middleton, in lieu of subsidies granted by chap. 8 of 1900, and chap. 7 of 1901.

Application having been made, the company was admitted to contract for this work on December 28, 1903, the time for completion being fixed as by August 1, 1905.

No portion of these subsidies has been paid up to June 30, 1904.

Midland Railway Company, Limited.

(See Nos. 336, 421, 427.)

This company was incorporated by the Act of the province of Nova Scotia, 59 Vic., chap. 85 (1896), with powers to build a railway from Windsor to a point at or near Maitland, then, via Clifton, to a point between Truro and Stewiacke, on the Intercolonial; thence to Eastville; with extensions and branches to coal and iron fields, and shipping ports.

By the Dominion Subsidy Act, 57-58 Vic., chap. 4 (1894), authority was given for the grant of a subsidy of $3,200 per mile for 90 miles of railway from Newport or Windsor to Truro, or to a point between Truro and Stewiacke, and from a point on the said railway to a point at or near Eastville, and from Eastville, through the valley of Musquodoboit river, towards a point on the Dartmouth branch of the Intercolonial, in lieu of a subsidy authorized in 1892; also for a railway bridge over the River Shubenacadie, a subsidy of 15 per cent on the value of the structure; the total of the subsidies not to exceed $300,000.

The Midland Railway Company having applied, were admitted to contract for these works on July 30, 1896.

By the Subsidy Act, 62-63 Vic., chap. 7 (1899), in lieu of the foregoing, there was authorized a grant of $3,200 per mile, with a further grant of 50 per cent on cost in excess of $15,000 per mile, up to a limit of $6,400 per mile, for a railway from Windsor, N.S., to Truro via Clifton; and the Midland Railway Company having applied for it they were admitted to contract on December 7, 1899.

The sum of $1,750 was paid during the past fiscal year, making the total payments $362,200.30 up to June 30, 1904.

Montfort Colonization Railway Company.

(See Annual Report for 1900-01.)

Montfort and Gatineau Colonization Railway Company.

(Now part of Great Northern Railway Company of Canada.)

(See Annual Report for 1902-03.)

Montreal and Champlain Junction Railway Company.

(See Annual Report for 1892-93.)

Montreal and Lake Maskinongé Railway Company.

(See Annual Report for 1890-91.)

Montreal and Sorel Railway Company.

(See Annual Report for 1892-93.)

Montreal and Western Railway Company.

(See Annual Report for 1893-94.)

Montreal and Ottawa Railway Company.

(*Formerly the* **Vaudreuil and Prescott Railway Company.** *Name changed by 58 Vic., ch. 58.*)

(See Annual Report for 1898-99.)

Montreal and Province Line Railway Company.

(See Annual Report for 1901-02.)

Napanee, Tamworth and Quebec Railway Company.

(*Name changed to the* **Kingston, Napanee and Western Railway Company** *by the Act 53 Vic., ch. 62.*)

(See Annual Report for 1895-96.)

Nakusp and Slocan Railway Company.

(See Annual Report for 1894-95.)

New Brunswick and Prince Edward Island Railway Company.

(See Annual Report for 1888-89.)

New Brunswick Coal and Railway Company.

(See No. 522.)

This company was incorporated by the Act 1 Edward VII., chap. 77 (New Brunswick), with powers to construct a line of railway from Chipman to Gibson, with the

right to build branches thereto and connecting with any railway or railways in New Brunswick.

By the Subsidy Act of 1901, 1 Edward VII., chap. 7, item 7, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400, was authorized for a line of railway from Chipman station, New Brunswick, to Gibson, in lieu of the subsidies granted by 1897, chap. 4, and 1899, chap. 7, sec. 2, item 31, not exceeding 45 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on June 30, 1902.

The sum of $48,000 was paid during the past fiscal year, the total paid up to June 30, 1904.

New Glasgow Iron, Coal and Railway Company.

(See Annual Report of 1895-96.)

Northern and Pacific Junction Railway Company.

(See Annual Report of 1890-91.)

Northern and Western Railway Company.

(See Annual Report of 1889-90.)

(Also under the head 'Canada Eastern Railway' in Annual Report of 1894-95.)

Nova Scotia Central Railway Company.

(See Annual Report for 1898-99.)

Nova Scotia Eastern Railway Company, Limited

(See Nos. 516, 519, 563, 607.)

This company was incorporated by the Act 1 Edward VII., chap. 130 (Nova Scotia), with powers to construct a line of railway from a point on the Intercolonial Railway at or near New Glasgow, in the county of Pictou, and passing through the counties of Pictou and Guysborough, to the deep waters of Country Harbour, in the county of Guysborough, and from the Cross Roads, Country Harbour, in the said county of Guysborough, to a point at or near the town of Guysborough, and thence to a point on the Strait of Canso, in the said county of Guysborough, and such other lines as may become feeders for the main trunk line above described.

By the Subsidy Act of 1901, 1 Edward VII., chap. 7, item 1, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400, was authorized for a line of railway from a point on the Intercolonial Railway, at or near New Glasgow

to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, in lieu of the subsidies granted by 1897, chap. 4, and 1899, chap. 7, sec. 2, item 34, not exceeding 80 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on February 19, 1903.

By the Subsidy Act of 1903, chap. 57, items 19 and 63, the grant of subsidies was authorized, on terms similar to the above, for lines of railway from New Glasgow to Cross Roads, Country Harbour, via Guysborough, to the Strait of Canso, with a branch from Cross Roads down the Country Harbour river to navigable water, 116 miles; and from Dartmouth through the Musquodoboit valley to a point at or near Melrose, to connect there with the railway mentioned in item 19.

The company having applied, were admitted to contract under both subsidies, the two agreements being dated April 19, 1904; the railways to be completed by December 31, 1906.

No payments have been made up to June 30, 1904.

Nova Scotia Southern Railway Company.

(See Annual Report for 1902-03.)

Ontario and Pacific Railway Company.

(*Name changed to* **Ottawa and New York Railway Company**, *by 60-61 Vic., ch. 57, 1897.*)

(See Annual Report for 1901-02.)

Ontario and Quebec Railway Company.

(See West Ontario Pacific Railway Company, and Annual Report for 1891-92.)

Ontario, Belmont and Northern Railway Company.

(See Annual Report for 1896-97.)

Ontario and Rainy River Railway Company.

(*Amalgamated with and under the name of the* **Canadian Northern Railway Company** *under the Act 62-63 Vic., ch. 80.*)

(See Ontario and Rainy River Railway Company in Annual Report for 1902-03, and under Canadian Northern Railway Company in present report.)

Orford Mountain Railway Company.

(See Annual Reports for 1893-94 and 1894-95.

Ottawa and New York Railway Company.

(See Ontario and Pacific Railway Company.)

Ottawa, Arnprior and Parry Sound Railway Company.

(*Now the* **Canada Atlantic Railway Company**, *by amalgamation, under the Act 62-63 Vic., ch. 81, 1899.*)

(See Annual Report for 1898-99.)

Ottawa and Gatineau Valley Railway Company.

(*Name changed to the* **Ottawa and Gatineau Railway Company**, *by the Act 57-58 Vic., ch. 87, which consolidated and amended Acts relating to the company.*)

(*Name further changed to the* **Ottawa Northern and Western Railway Company**, *by the Act 1 Edw. VII., ch. 80, 1901.*)

(See Nos. 8, 26, 58, 151, 305, 349, 379, 409, 414, 426, 492, 453, 526 and 557.)

By the Act 48-49 Vic., chap. 29 (1885), the grant of a subsidy to this company was authorized (in lieu of subsidies granted in previous years), namely, for a line of railway from Hull station towards the village of Le Désert, 62 miles, the amount being $320,000. The subsidy having lapsed, it was revoted by the Act 52 Vic., chap. 3 (1889),

Under authority of an order in council of July 10, 1889, a contract with the company for the work in question, 62 miles, was signed on August 19, 1889.

By the Subsidy Act, 56 Vic., chap. 2 (1893), the unpaid balance, $89,248, was revoted.

By the Subsidy Act, 57-58 Vic., chap. 6 (1894), authority was given for subsidizing, to the extent of $64,000, a further distance of 20 miles from the end of the 62 miles already subsidized, and a contract for the work was entered into with the company on October 7, 1895.

By the Subsidy Act, 60-61 Vic., chap. 4 (1897), in lieu of this subsidy, the said 20 miles were subsidized to the extent of $3,200 per mile, with a further subsidy of 50 per cent of the expenditure in excess of $15,000 a mile; the total subsidy not to exceed $6,400 a mile.

The company were admitted to contract under this subsidy on July 29, 1899.

By the Subsidy Act, 60-61 Vic., chap. 4 (1897), the unpaid balance, $35,872, of the vote of 1893 was revoted, and a contract was made with the company thereunder on July 29, 1899.

The total payments up to June 30, 1894, amounted to $284,128.

Under dates September 21, 1899, and November 26, 1900, contracts were entered into for the construction, under subsidy, of a bridge across the River Ottawa at Ottawa, being made with this company conjointly with the Pontiac Pacific Junction Railway Company. This bridge was completed, and payment of the full amount of

the subsidy was made during the fiscal year 1900-01. (See Pontiac Pacific Junction Railway in Annual Report for 1900-01.)

By the Subsidy Act of 1899, chap. 7, item 39, the grant of aid to the extent of $3,200 a mile, with 50 per cent additional on excess cost over $15,000 a mile, was authorized for the company's railway through Hull, not exceeding 4 miles.

A contract for the work was made on February 15, 1902, and the road being built, the subsidy for the actual distance, 1·28 miles, connecting the old Gatineau Valley Railway with the approach to the bridge across the River Ottawa, was paid during that fiscal year, namely, $8,192, making the total payments to this company on subsidy account, $292,320, up to June 30, 1902.

Under the authority of the Act 1 Ed. VII., chap 80, this railway has been purchased by the Canadian Pacific Railway, and now forms part of its system.

By the Subsidy Act of 1899, chap 7, item 12, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent of cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 9 miles of a railway from Aylmer to Hull, in lieu of the subsidy granted by chap. 4 of 1897.

The above company having applied, they were admitted to contract for the work on July 10, 1903.

By the Subsidy Act of 1901, chap 7, item 11, the grant of a similar subsidy was authorized for a line of railway from the end of the 62nd mile subsidized, towards Desert, in lieu of subsidy granted by the Act of 1897, chap. 4, item 5 ; also by section 3 of the Act of 1897 the Governor in Council was authorized to grant to the company its unearned balance of subsidy upon the 62 miles of its line of railway from Hull towards Desert, granted by the Act, of 1897, chap. 4, sec. 3, paragraph 3, a sum not exceeding $35,872.

The above company having applied, were admitted to contract under both subsides, the two agreements being dated August 25, 1903.

During the past fiscal year, payments of subsidies have been made to the extent of $118,368, making the total amount paid up to June 30, 1904, $410,688.

Ottawa Northern and Western Railway Company.

(See Ottawa and Gatineau Valley Railway Company, and Pontiac Pacific Junction Railway Company.)

Oshawa Railway and Navigation Company.

(*Name changed to the* Oshawa Railway Company, *by 54-55 Vic., ch. 91.*)

(See Annual Report for 1895-96.)

Parry Sound Colonization Railway Company.

(See Annual Report for 1895-96.)

Pembroke Southern Railway Company.

(See Annual Report for 1899-1900.)

Phillipsburg Junction Railway and Quarry Company.

(See Annual Report for 1894-95.)

(*Now the* **Phillipsburg Railway and Quarry Company.** *Name changed by 58 Vic., ch. 65, 1895.*)

(See Annual Report for 1899-1900.)

Port Arthur, Duluth and Western Railway Company.

(*Formerly the* **Thunder Bay Colonization Railway Company.**)

(See Annual Report for 1892-93.)

Pontiac and Renfrew Railway Company.

(See Annual Report for 1899-1900.)

Pontiac Pacific Junction Railway Company.

(See Annual Report for 1900-01.)

Qu'Appelle, Long Lake and Saskatchewan Railway Company.

Leased to Canadian Pacific Railway Company.)

(See Annual Report for 1890.)

Quebec Bridge Company.

(*Now the* **Quebec Bridge and Railway Company.**—*name changed by the Act 3 Ed. VII., ch. 177, 1903.*)

(See No. 467 and Acts, chaps 54 and 177 of 1903.)

This company was incorporated by the Dominion Act. 50-51 Vic., chap. 98 (1887), with powers to construct a railway bridge over the River St. Lawrence near Quebec, and to arrange the same for the use of foot passengers and vehicles, and to construct and operate lines of railway to connect with existing or future lines of railway on each side of the river.

By the Act 60-61 Vic., chap. 69 (1897), the powers of the company were revived, and the time for construction was extended to June 29, 1902.

By the Act 63-64 Vic., chap. 115 (1900), the time for completion was extended to June 14, 1905, and the company were further empowered to arrange for the placing

of electric wires on the bridge and connecting railways, and for the passage of electric street railway or tram cars.

By the Railway Subsidy Act, 62-63 Vic., chap. 7 (1899), the grant of a subsidy to this company of $1,000,000 was authorized for a railway bridge over the River St. Lawrence at Chaudière basin, and by the Act of 1900, chap. 8, clause 10, it was made applicable, one-third to the substructure and approaches, and two-thirds to the superstructure.

On November 12, 1900, the company were admitted to contract for this subsidy work.

The site and plans of the bridge were approved by the Railway Committee of the Privy Council, and by an order in council dated May 16, 1898.

The structure is to be a cantilever bridge, composed of two approach spans of 220 feet each, two anchor spans of 500 feet each, and a centre span of 1,800 feet from centre to centre of the piers. The under side of the bridge will give a height of 150 feet above high water. When completed, it will comprise a double track railroad two lines for electric tramways, and two ordinary roads for vehicles and foot passengers.

Subsidy payments to the extent of $374,353.33 were made up to June 30, 1903. No further payments have been made.

By the Dominion Special Act, 3 Ed. VII., chap. 177, assented to on July 10, 1903, the name of the above company was changed to 'The Quebec Bridge and Railway Company,' with powers to construct lines of railway from the northern terminus of the company's bridge to the city of Quebec, also from the southern terminus of the said bridge to a point at or near the intersection of the Grand Trunk Railway with the Intercolonial Railway at Chaudière Curve, or to some point on those lines near named section to connect with the line of the Canadian Pacific Railway. Other powers of a general commercial character were granted. The powers of the company for the general commercial character were granted. The powers of the company for the construction of all its authorized works was extended to July 10, 1910.

Negotiations were had having in view entry into agreement for the guarantee by the government of the bonds of the company, and for conveying to the government, at its option, the bridge, railways and property of the company.

Under the authority of an order in council, dated October 19, 1903, and under the same date, the company entered into an agreement with the government, accordingly, subject to ratification by parliament; and by the Public Act of the same year, 1903, chap. 54, such agreement, annexed as a schedule to the Act, was so ratified and confirmed, subject to the provision that the consent of parliament shall be given before the government exercise the right of taking over the company's property. It was further provided that the Governor in Council should have the right to appoint three directors of the company.

By this agreement the company releases the government from any claim for the unpaid balance of the subsidy of $1,000,000 granted to them, and the government

agrees to guarantee the principal and interest of the company's bonds to the extent of $6,678,200, such bonds to be payable in 50 years from the date thereof, bearing interest at 3 per cent per annum, payable half-yearly, and to be a first charge, secured by a mortgage, upon all the company's franchises, tolls, and property of whatsoever kind, the mortgage to secure such securities to be made to a trustee or trustees approved by the Governor in Council and to be subject to like approval, the government to have the right to take possession of the undertaking and property at any time on one month's notice, paying the shareholders the amount of their stock at par value, not exceeding $265,585.70, with simple interest at 5 per cent, and an addition of 10 per cent on the par value of fully paid up shares, and assuming the approved obligations of the company for construction, operation and maintenance, according to the terms of the aforesaid bonds and the mortgage securing the same. The date for the completion of the works was fixed by December 1, 1903.

In pursuance of this authority there was executed, on February 1, 1904, between the Quebec Bridge and Railway Company, the Royal Trust Company (Montreal), and His Majesty, a mortgage trust deed, conveying to the said trust company as trustees all the property and franchises of the bridge company and providing for the issue of bonds to the extent of $6,678,200.

In pursuance of the requirements of the said agreement, the plans, profiles and specifications of the company's proposed railway works have been approved, as follows:—

By order in council of January 27, 1904, for the line from the northern terminus of the bridge to Champlain market, in the city of Quebec, 6·44 miles, and by an Order in Council of February 2, 1904, from the south terminus of the bridge to a point of junction with the Intercolonial Railway, 12,600 feet.

Under the terms of the company's aforesaid agreements in respect of the bond guarantee, the amount of the issue of bonds is to be fixed by the Chief Engineer's certificate as to the value of the work done and materials delivered, from time to time, on the company's works.

Up to June 30, 1904, no issue of bonds has been authorized.

Quebec Central Railway Company.

(See Annual Report of 1895-96.)

Quebec and Lake St. John Railway Company.

(See Annual Report of 1895-96.)

Quebec, Montmorency and Charlevoix Railway Company.

(See Annual Report for 1894-95.)

Quebec and New Brunswick Railway Company.

(See No. 517.)

This company was incorporated by the Act (1900) 63-64 Vic., chap. 75, with powers to construct a railway from Connor station on the St. Francis Branch of the Temiscouata Railway (New Brunswick) to a point on the Intercolonial Railway at or near St. Charles Junction, or a point on the Quebec Central Railway at or near St. Anselme, or a point on the Grand Trunk Railway at or near Chaudière Junction (Quebec) a distance of about one hundred and thirty miles.

By the Railway Subsidy Act of 1901, 1 Edward VII., chap. 7, item 2, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on an average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized for a railway from a point at or near St. Charles or at or near Chaudière Junction or a point on the Quebec Central Railway, near St. Anselme, towards the present terminus of the St. Francis Branch of the Temiscouata Railway, not exceeding 45 miles, and for a line of railway from the mouth of the St. Francis river, New Brunswick, westerly towards Chaudière Junction, not exceeding 15 miles, in lieu of the subsidy granted by 1900, chap. 8, sec. 2, item 23; also for a line of railway in extension of the St. Francis Branch of the Temiscouata Railway to the mouth of the St. Francis river, New Brunswick, in lieu of the subsidy granted by 1899, chap. 7, sec. 2, item 43, not exceeding 3 miles; in all not exceeding 63 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on August 25, 1902.

No payments have been made up to June 30, 1904.

Red Deer Valley Railway and Coal Company.

(See Annual Report for 1902-03.)

Restigouche and Western Railway Company.

(Now International Railway Company of New Brunswick.)

(See Nos. 259, 352 and 384.)

This company was incorporated by the Act of the province of New Brunswick, 60 Vic., chap. 82 (1897), with powers to construct a railway from Campbellton, to a point on the River Saint John between Grand Falls and Edmundston.

By the Subsidy Act 60-61 Vic., chap 4 (1897), there was authorized a subsidy for a railway from Campbellton, on the Intercolonial Railway, towards Grand Falls, N.B., 20 miles, $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile; the whole not to exceed $6,400 a mile. This was in lieu of a previous subsidy to a specified company.

The Restigouche and Western Railway Company having applied, were admitted to contract for the work on December 24, 1897.

During the past fiscal year subsidy to the extent of $30,208 was paid, making the total payments $77,138 up to June 30, 1904.

Schomberg and Aurora Railway Company.

(See No. 386.)

This company was incorporated by the Dominion Act, 59 Vic., chap. 34 (1896), with powers to build a line of railway from a point on the Grand Trunk Railway between King and Newmarket to the village of Schomberg.

By the Subsidy Act, 60-61 Vic., chap. 4 (1897), the grant of a subsidy of $3,200 a mile for 15 miles between the points named above, with addition of 50 per cent of the cost in excess of $15,000 a mile, but not exceeding in all $6,400 a mile was authorized.

A subsidy agreement was entered into with the company accordingly on July 29, 1899.

By the Subsidy Act 1 Edward VII., chap. 7, item 10 (1901), this subsidy was, in effect, revoted, and a new contract was made with this company on February 3, 1902; the road to be completed by October 31, 1903.

By the Subsidy Act, 63-64 Vic., chap. 8, item 13 (1901), the grant of a subsidy of $3,200 a mile with a further subsidy of 50 per cent on average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized for the extension of the company's line from its easterly terminus to a point at or near Bond's lake, Ontario, not exceeding 4 miles.

The company having applied for this subsidy, a contract was entered into with them accordingly on July 30, 1902.

During the past fiscal year payment of subsidy was made to the extent of $46,144, the total paid up to June 30, 1904.

Shuswap and Okanagan Railway Company.

(See Annual Report of 1894-95.)

South Norfolk Railway Company.

(See Annual Report of 1888-89.)

South Shore Railway Company.

(See Annual Report of 1896-97.)

South Shore Railway Company, Quebec.

(See Nos. 441, 468, 469 and 513.)

This company was incorporated by the Quebec Act of 1894, chap. 72, and the undertaking was declared to be a work for the general advantage of Canada by the Do-

minion Act, 60 Vic., chap. 10 (1896), which authorized the construction of a line of railway from a point in the town of Levis to a point on the Canada Atlantic Railway at or near Valleyfield.

By the Subsidy Act, 62-63 Vic., chap. 7 (1899), the grant of a subsidy to this company for 82 miles of a railway from Sorel Junction to Lotbinière was authorized, $3,200 a mile, with an addition of 50 per cent of cost in excess of $15,000 a mile, but not exceeding in the whole $6,400 a mile. The company were admitted to contract for this work on May 9, 1900.

By the same Act the grant of a subsidy was authorized towards the construction of a bridge over the River Richelieu at Sorel, not exceeding $35,000. The company were admitted to contract for this work on December 23, 1899.

By the same Act the grant of a subsidy to this company was authorized towards the renewal of the railway bridge over the River Yamaska at Yamaska, the amount being $50,000. They were admitted to contract for the work on May 9, 1900.

By the Subsidy Act, 63-64 Vic., chap. 8 (1900), the grant of subsidy to the extent of $50,000 was authorized for a railway bridge over the River St. Francis, such bridge to be free to foot passengers and vehicles. A contract was entered into with the company for the work on June 29, 1901.

By the Subsidy Act of 1903, chap 57, sec. 3, subsec 2, the grant of a subsidy of $50,000 was authorized towards the construction of a steel superstructure of a railway bridge on the St. Francis river, county of Yamaska, in lieu of the grant under item 38 of sec. 2 of chap 8 of 1900, but subject to the same conditions as expressed therein, the subsidy to be payable to the Canadian Bridge Company.

A contract was entered into for this work accordingly on December 21, 1903.

By the same section of the said Act, subsec. 3, the grant of a subsidy was authorized to the Canadian Bridge Company of Walkerville, to strengthen and complete the foundation and approaches to the bridge over the St. Francis river, subsidized in favour of the above company by section 3, of chap 7, of 1899, $35,000, which amount shall remain the first charge on the road, and shall be recouped to the treasury out of subsidies earned or to be earned.

A contract was entered into for this work accordingly on December 21, 1903.

During the past fiscal year payment of subsidy was made to the extent of $80,494.16. The total of payments up to June 30, 1904, was $199,784.35. This includes the sum of $16,164.63 for completing the Montreal and Sorel Railway (see report of 1899-1900.)

St. Catharines and Niagara Central Railway Company.

(See Annual Report for 1895-96.)

St. Clair Frontier Tunnel Company.

(See Annual Reports of 1890-91 and 1891-92.)

St. Gabriel de Brandon and Ste. Emélie de l'Energie Railway Company.

(See Annual Report for 1902-03.)

St. John Valley and Rivière du Loup Railway Company.

(See Annual Report for 1893-94.)

St. Stephen and Milltown Railway Company.

(See Annual Reports for 1895-96 and 1900-01.)

Stewiacke Valley and Lansdowne Railway Company.

(See Annual Report for 1895-96.)

St. Lawrence and Adirondack Railway Company.

(See Annual Reports for 1893-94 and 1900-01.)

St. Lawrence, Lower Laurentian and Saguenay Railway Company.

(*Name changed to* **Laurentian Railway Company**, *by Provincial Act 51-52 Vic., ch. 108.*)

(See Annual Report for 1891-92.)

St. Louis and Richibucto Railway Company.

(See Annual Report for 1884-85.)

St. Mary's River Railway Company.

(See Nos. 495, 614.)

This company was incorporated by the Dominion Act, 63-64 Vic., chap. 79 (1900), with powers to construct a railway from some point between Lethbridge and Stirling, on the railway of the Alberta Railway Company to some point on the international boundary line, between ranges 24 and 30, west of the 4th meridian, N.W.T., and, with the approval of the Governor in Council, to build branch lines, limited to 15 miles each in length.

By the Dominion Act 4 Ed. VII., chap 43 (1904), this company has been authorized to amalgamate with the Alberta Railway and Coal Company and the Canadian North-west Irrigation Company, under the name of the Alberta Railway and Irrigation Company.

By the Subsidy Act of 1903, chap 57, item 70, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line of railway from Spring Coulee, cross-

ing St. Mary's river at Cardston, 16 miles, and from a point on this line to or near the intake of the irrigation canal, about 16 miles, in all not exceeding 32 miles.

The company having applied, they were admitted to contract, on March 14, 1904, the lines to be completed by August 1, 1905.

During the past fiscal year, subsidy to the extent of $40,960 was paid, making the total of $115,960 up to June 30, 1904.

Témiscouata Railway Company—Rivière du Loup to Edmundston.

(See Annual Report for 1892-93.)

Thousand Islands Railway Company.

(See Annual Reports for 1895-96 and 1901-02.)

Tilsonburg, Lake Erie and Pacific Railway Company.

(See Annual Report for 1895-96.)

(No. 387.)

A further subsidy to this company was authorized by the Act 60-61 Vic., chap. 4 (1897), namely, for 3·50 miles from the then terminus, through Tilsonburg to the Michigan Central Railway, $3,200 a mile, with an addition of 50 per cent of the cost in excess of $15,000 a mile, the whole not to exceed $6,400 a mile.

Under date December 4, 1897, the company were admitted to contract. During the fiscal year 1898-99 the sum of $10,912 was paid, and in the fiscal year 1900-01 the sum of $7,159.48 was paid from this subsidy, making, with their previous subsidy of $51,200, paid in 1895-96, a total of $69,271.48.

By the Subsidy Act, 62-63 Vic., chap. 7, item 26 (1899), a subsidy of $3,200 per mile, with a further subsidy of 50 per cent on cost in excess of $1,500 a mile, not exceeding in all $6,400 a mile, was authorized for an extension from Tilsonburg to Ingersoll or Woodstock, not exceeding 28 miles.

Under authority of an order in council of September 11, 1901, a contract was made with the company accordingly on October 15, 1901; the road to be completed by October 1, 1902.

During the past fiscal year payment of subsidy was made to the extent of $4.000, making the total payments $117,431.48 up to June 30, 1904.

Trans-Canada Railway Company.

(See No. 540.)

This company was incorporated under the name of 'The Trans-Canadian Railway Company' by the Act 58-59 Vic., chap. 28 (1895), with powers to construct a railway

from a point at or near the city of Quebec; thence westerly and as nearly as practicable in a straight line to a point north of Lake Winnipeg; thence westerly by way of the Yellow Head or other convenient and practicable pass in the Rocky mountains; and thence by the Skeena river to Port Simpson or Port Essington, with the option of adopting any other more feasible route west of the Rocky mountains to reach a point on the Pacific coast between fifty-two and fifty-five degrees north latitude.

Powers were also given for operation of vessels in connection with their railway; for wharf, dock, elevator and warehouse construction, and for production and use of electric power; also for telegraph and telephone lines to any point on James' Bay, Hudson Bay and Hudson Straits.

Additional powers were given by the Act of 1894, chap. 65, for the construction of a branch from the main line at the St. Maurice river, Quebec, thence southerly to the village of Montcalm in the parish of St. Liguori, and thence in a direct line to the city of Montreal; the construction of such a branch not to be commenced until after two hundred miles of the main line beginning at the city of Quebec has been constructed and put into operation. This Act also changed the name of the company.

By the Act 2 Edw. VII., chap 108 (1902), the time for the construction of the railway authorized by the above Acts, was extended to May 15, 1912: their powers of construction were also extended as follows:—To enable the company to 'continue the construction of its main line, which was commenced at Roberval on the Quebec and Lake St. John Railway, from that point in a westerly or north-westerly direction,' and to build 'a branch line from the nearest point on its main line to deep water near the mouth of the Nottaway river,' (which empties into James' bay), and also 'a branch line from Chicoutimi to the mouth of the Saguenay river at or near St. Catharine's bay'; also, with the sanction of the Governor in Council, to enter into an agreement with the Great Northern Railway of Canada, the Quebec and Lake St. John Railway Company, or the Canadian Northern Railway Company, for conveying or leasing its railway, or for an amalgamation with such company.

By the Railway Subsidy Act of 1901, 1 Edw. VII., chap 71, item 25, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average expenditure in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized 'for a line of railway from Roberval, Quebec, westward towards James' bay, not exceeding 60 miles.'

The company having applied for this subsidy, a contract was entered into with them accordingly on January 19, 1903.

No payments have been made up to June 30, 1904.

Tobique Valley Railway Company.

(See Annual Report for 1893-94.)

Toronto, Grey and Bruce Railway Company.

(See Annual Report for 1887-88.)

United Counties Railway Company.

(See Annual Report for 1900-01.)

Vaudreuil and Prescott Railway Company.

(See *Montreal and Ottawa Railway Company.*)

Waterloo Junction Railway Company.

(See Annual Report for 1891-92.)

Western Counties Railway Company.

(*Name changed to* **The Yarmouth and Annapolis Railway Company,** *by 56 Vic., ch. 63.*)

(*Name further changed to* **The Dominion Atlantic Railway Company,** *by 57-58 Vic., ch. 69.*)

(See Annual Report for 1894-95.)

West Ontario Pacific Railway Company.

(*Leased to Ontario and Quebec Railway Company—C.P.R.*)

(See Annual Report of 1890-91.)

Woodstock and Centreville Railway Company.

(See Annual Report for 1895-96.)

Yarmouth and Annapolis Railway Company.

(See *Western Counties Railway Company.*)

York and Carleton Railway Company.

(See Annual Report for 1901-02.)

LAND SUBSIDIES.

A number of companies have been aided by subsidies in land, duly authorized by parliament and granted by the Department of the Interior, to whose report reference must be had for information as to their position.

In the annual report of this department for 1895-96 information was given as to a number of these land subsidized companies.

CANALS.

The total expenditure charged to capital account on the original construction and the enlargement of the several canals of the Dominion, up to June 30, 1904, was $87,223,164.67. A further sum of $21,090.389.93 has been expended from the consolidated fund, including the repairs, renewals, maintenance and operation of these works, making a total of $108,313,554.60. The total revenue derived, including tolls, and rentals of lands and water-powers, amounted to $13,320,222.95. (See the accountant's statements, Part II., pp. 27, 28, 47 and 48.)

The total expenditure on canals for the fiscal year ended on June 30, 1904, was as follows:—

On construction and enlargement, a total of $1,880,787.20, and a further sum of $1,099,771.68 for repairs, renewals, operation, and revenue collection, making a total for the year of $2,980,558.88.

The total net revenue collected for the fiscal year was $79,536.51, a decrease compared with the net revenue of the fiscal year 1902-03 of $150,676.64. No tolls were charged on any of the canals.* On July 1, 1903, the balance of rents unpaid was $83,536.93. The rents accrued during the year amounted to $88,077.84, and the rents received to $72,701.28, an increase of $2,300.23, leaving a balance of rents uncollected on June 30, 1904, amounting to $97,955.81.

The total expenditure on canal staff and maintenance, repairs and renewals amounting, for the year, to $1,099,771.68, an increase of $25,394.67, and the total net receipts amounting, as above, to $79,536.51, the amount of such expenditure in excess of receipts was $1,020,235.17.

The above figures relate to the fiscal year 1903-04, but very voluminous statistics relating to the canal traffic, and various commercial statistics, for the *season of navigation* of the year 1903 will be found in Part V., 'Canal Statistics.'

The total traffic through the several canals of the Dominion for the season of 1903 amounted to 9,203,817 tons, an increase of 1,690,620 tons compared with the previous year. This includes 5,511,868 tons passing through the Sault Ste. Marie canal against 4,729,268 tons in 1902.

The following features of the principal canal traffic during the season of 1903 will be of interest:—

On the Welland canal, 1,002,919 tons of freight were moved, an increase of 347,532 tons, of which 543,993 tons were agricultural products, an increase of 188,121 tons, and 158,721 tons produce of the forest; of coal 147,884 tons were carried; 732,829 tons passed eastward, and 270,090 tons westward; 979,817 tons were through freight, of which 715,595 tons passed eastward.

* All tolls were, by orders in council of April 27, and May 19, 1903, abolished for the seasons of 1903 and 1904. In the fiscal year 1902-03 the net canal tolls amounted to $159,959.56, being for the portion of the year between July 1, 1902, and the end of that season. In the fiscal year 1901-02, when the system of tolls was in force, the tolls amounted to $236,942.72.

Of the through freight Canadian vessels carried 400,491 tons, an increase of 73,384 tons, and United States vessels 579,326 tons, an increase of 260,336 tons.

The total freight passed eastward and westward through this canal to United States ports was 370,225 tons, an increase of 101,196 tons compared with the year 1902.

The quantity of grain passed down the Welland and St. Lawrence canals to Montreal was 351,936 tons, an increase of 143,721 tons compared with the previous year; of this, 40,641 tons were transhipped at Ogdensburg as against 34,060 tons transshipped in 1902. The further quantity of 48,131 tons of grain passed down the St. Lawrence Canals, only, to Montreal, making the total 400,067 tons.

On the St. Lawrence canals 1,681,206 tons of freight were moved, an increase of 588,073; of which 756,379 were eastbound through-freight, and 211,438 tons westbound through-freight; 801,544 tons were agricultural products, 523,564 tons merchandise, 415,642 tons coal and 191,813 tons forest products.

Seventy-four cargoes of grain, aggregating 99,582 tons, were taken down direct to Montreal through the Welland and St. Lawrence canals in 1903, as against thirty-seven, aggregating 35,253 tons, in 1902, twenty-two cargoes, aggregating 17,303 tons, in 1901, and fifteen cargoes, aggregating 7,924 tons in 1900.

On the Ottawa river canals the total quantity of freight moved was 436,473 tons, a decrease of 8,209, of which 410,620 tons were produce of the forest.

On the Chambly canal 346,571 tons were moved, a decrease of 32,871 of which 188,335 tons were produce of the forest, and 79,894 tons of coal.

On the Rideau canal 61,120 tons were carried, an increase of 10,241; 29,093 tons being the product of the forest and 8,245 tons of coal.

On the St. Peters canal 90,864 tons were carried, an increase of 17,326, of which 49,681 tons were merchandise, and 37,760 tons coal.

On the Murray canal 30,389 tons passed, a decrease of 4,789, and 7,405 tons of this were the product of the forest.

On the Trent Valley canal, 42,407 tons were moved, of which 40,477 tons were the product of the forest.

On the Sault Ste. Marie canal, the total movement of freight was 5,511,868 tons, being an increase of 782,600 tons carried in 4,351 vessels, the number of lockages being 3,242. Of wheat 32,232,315 bushels, and of other grain 6,154,448 bushels were carried; 2,808,927 barrels of flour, 2,683,500 tons of iron ore, 998,780 tons of coal, and 30,609,187 feet, board measure of lumber; all these items show a very considerable increase. The total traffic at this point, accommodated by the canals, the American and Canadian, amounted to 34,674,437 tons, a decrease of 1,287,626 tons, carried in 18,595 vessels, a decrease of 4,036. The total quantity of wheat carried was 61,384,552 bushels, a decrease of 15,361,797, and of other grain 32,095,646 bushels, an increase of

6,783,133. Of lumber the total was 1,003,192,000 feet, board measure, a decrease of 74,740,942.*

* NOTE.—The following items of information respecting the traffic during the season of 1903 through the two canals, the United States and the Canadian, at the Sault Ste. Marie, will be found of much interest in view of the enormous proportions and rapid growth of lake commerce. They are taken from 'Statistics of Lake Commerce', compiled under the direction of Majors W. H. Bixby, and W. H. Fisk, Corps of Engineers, U.S.A., from the official records.

The season of navigation lasted for eight months and 14 days, the Canadian canal being open from April 2nd to December 13, 256 days, and the United States canal from April 11 to December 15, or 249 days.

The total freight passed through the two canals during the season aggregated 34,674,437 net tons (2,000 lbs) a decrease of 1,286,709 tons, or 4 per 100, against an increase the preceding season of 7,558,081 tons. That season was, however, an extraordinary one, and the traffic was the largest by 6,271,372 tons ever known. Fifty-five thousands and one hundred and seventy-five passengers, a decrease of 4,202, were carried. The Canadian canal carried 16 per cent of the total freight, or 5,502,185 tons, and 58 per cent of the passengers, or 32,019. There was an increase of 773,824 tons of freight through the Canadian canal, and a decrease of 4,580 passengers.

As showing the enormous development of traffic at this point, it has to be noted that the first canal (American) was opened in 1855; in 1861 the freight carried amounted to 87,847 net tons, valued at $6,000,000; in 1891, 8,888,759 tons, valued at $128,178,208, and in 1902, the greatest quantity, 35,965,146 tons, valued at $358,306,300.

In 1903 the total value of the freight was $349,405,014; the total amount paid for transportation was $26,727,735.17. The average distance freight was carried was 835·6 miles; the average cost of transport per ton was $0.77, and the average cost per mile per ton was 0·92 of a mill.

The number of registered vessels was 895, of which 799 were American, comprising 566 steamers valued at $60,007,000 and 233 sailing vessels valued at $8,245,800, the total registered tonnage being 1,152,254 tons, and 96 Canadian, comprising 86 steamers valued at $5,977,500 and 10 sailing vessels valued at $407,000; their total registered tonnage being 70,944 tons. Besides these, a number of small unregistered craft, both American and Canadian, used the canals, carrying a proportion of the freight to the extent of, in all, 37,587 tons.

The number of vessels in commission was smaller than in the previous year, being 895 as against 935. Of these, however, 50 were new vessels, large steam freighters ranging from 200 to 468 feet in length.

The tendency is to increase the size and carrying capacity of vessels. While there were only 89 carrying 2,000 to 3,000 tons as against 112 the preceding year, there were 162 as against 159, carrying from 3,000 to 4,000 tons, 36 as against 38, carrying from 4,000 to 5,000 tons, 41 as against 39, carrying from 5,000 to 6,000 tons, 63 as against 54, carrying from 6,000 to 7,000 tons, 54 as against 45, carrying 7,000 to 8,000, and 19 as against 11, carrying 8,000 tons and over. There were 97 as against 87 of from 400 to 500 feet in length. The largest single cargo was 8,914 tons, carried by the steamer 'Wm. Edenborn', and the next largest by the barge 'Manila', 8,671 net tons; both owned by ehe Pittsburg Steamship Co.

There were 14,243 passages of vessels through the American and 4,353 through the Canadian canal, a total of 18,569 as against 22,659 the preceding year. The lockages through the American canal numbered 8,395, and through the Canadian 3,247, a total of 11,642 against 12,846 the previous season.

The principal items of freight compared with the previous year were as follows: coal 6,937,632 tons, an increase of 2,125,155 tons, of which 5,788,628 tons were bituminous; flour 7,093,380 barrels, a decrease of 1,816,860; wheat 61,384,552 bushels, a decrease of 15,346,413; grain other than wheat 32,095,646 bushels, an increase of 4,354,826; salt 454,882 barrels, an increase of 11,576; copper 112,877 tons, a decrease of 7,735 tons; iron ore 21,654,898 tons, a decrease of 2,622,657 tons; unclassified freight, 659,839 tons, a decrease of 80,261 tons. No silver ore was carried.

The eastbound traffic aggregated 26,932,238 tons, of which 3,210,674 tons went to Lake Michigan, 1,155,377 to Lake Huron, 22,212,177 to Lake Erie, and 354,010 to Lake Ontario ports; 955,452 tons were carried in Canadian vessels, from Canadian to Canadian ports, 263,748 tons in Canadian vessels from Canadian to American ports, and 190,286 tons in Canadian vessels from American to Canadian ports.

The westbound traffic aggregated 34,674,437 tons, of which 90,031 tons went from Lake Michigan, 226,047 tons from Lake Huron, 7,329,727 tons from Lake Erie and 96,394 tons from Lake Ontario ports; 206,535 tons were carried in Canadian vessels from Canadian to Canadian ports, 259,232 tons in Canadian vessels from Canadian to American ports, and 35,829 in Canadian vessels from American to Canadian ports.

The freight charges per unit on the principal items were as follows: on coal $0.53 per ton; flour $0.12 per barrel; wheat and other grain $0.16 per bushel; manufactured iron $2 per ton, pig iron $1.50; salt $0.15 per barrel; copper $1.43 per ton; iron ore $0.75 per ton; lumber $2.50 per M ft. B.; general merchandise $2 per ton.

In connection with the question of canal versus railway transport of grain from the west, it may be noted that whereas grain and pease passed down to Montreal through the Welland and St. Lawrence canals to the extent of 351,936 tons, an increase of 143,721 tons, compared with the previous year, the quantity carried to Montreal via the Canadian Pacific and Grand Trunk Railways amounted to 253,959 tons, a decrease of 9,902 tons. Over the route from Depot Harbour, on Georgian bay, Lake Huron via the Canada Atlantic Railway to Coteau Landing, at the head of the Soulanges canal, thence by barge to Montreal, in the season of 1902 the total freight so carried to Montreal was 273,145 tons; of this quantity 11,732 tons were corn, 216,305 wheat. In 1903 the total freight carried was 315,779 tons, 109,937 tons were corn and 175,954 wheat.

The quantity of grain carried to tide water on the New York state canals was 327,840 tons, an increase of 9,163 tons, while the quantity carried by the railways of the state to tide water amounted to 3,793,973 tons, a decrease of 764,563.

Of the total east and west bound freight carried by the canals of the State of New York (the Erie, the Champlain, the Black river, the Cayuga and Seneca, and the Oswego), and the competing railways (the New York Central and the Erie Railway) respectively, (amounting in 1903 to 72,283,508 tons—greater by 207,734 tons than in 1902), the proportion carried by the canals has fallen steadily from 68·9 per cent in 1859 and 47·0 per cent in 1869, to 6·8 per cent in 1898, 7·2 per cent in 1899, 5·2 in 1900, 5·1 in 1901, 5·5 in 1902, and 5·6 in 1903. These canals carried in 1903, 3,615,385 tons, an increase of 340,775 tons.

The enlarged Erie canal, between Buffalo and Albany, is 350½ miles long; comprises 72 locks, 110 x 18 feet, with a depth of 7 feet of water, accommodating, as a maximum, vessels of 240 tons burden. The original canal was completed in 1836, and the enlargement in 1862. The total cost of construction was $51,609,200.

By means of the enlarged Canadian canal system and the intermediate waterways, a minimum depth of fourteen feet of water from Lake Superior to the head of ocean navigation at Montreal is afforded; the smallest locks being 270 feet in length and 45 feet in width, intended, for purposes of ordinary traffic, to accommodate vessels 255 feet long and 44 feet beam.* As an index to the carrying power of the canal works, a vessel 247 feet of length and width 42·6 feet, drawing 14 feet of water and carrying 2,212 tons of corn may be a typical of their general accommodation, though not of their full capacity.

The through route between Montreal and Port Arthur, on the west shore of Lake Superior, open as a 14-foot navigation, comprises 73 miles of canal, with 48 locks, and 1,150 miles of river and lake waters, or a total of 1,223 miles. From Montreal to Duluth, at the south-west of Lake Superior, the total distance is 1,357 miles, and to Chicago, 1,286 miles. A summary of this route will be found in the Chief Engineer's

*In exceptional cases, and in cases of emergency, this length can, with certain manœuvring, be somewhat increased; being governed, of course, by the form of the vessel. As a matter of fact, there are vessels now using the canals whose length, over all, is 265 feet, and width of beam 37 feet.

report, Part I., and further details of the several works in the pages immediately following. At Port Arthur and at Fort William (about six miles distant), the Canadian Pacific Railway gives communication to and from the west.

The approaches to the canals and the channels through the intermediate river reaches are well defined, and are lighted with gas buoys under the control of the Department of Marine and Fisheries, admitting of safe navigation, if in the hands of competent pilots, both day and night. In the cases of the Sault Ste. Marie, the Cornwall, and the Soulanges, they are well lighted throughout by electricity, and the Lachine canal is partially so lighted. The Sault Ste. Marie, the Cornwall and the Soulanges canals are electrically operated. Installments for electrical lighting and operation of the Welland canal are in progress; also, for like purposes on the Lachine. The Farran's Point canal is lighted with acetylene gas.

The improvement works being carried on at Port Colborne, the Lake Erie entrance of the Welland canal, comprise the deepening of the approach to the canal to 22 feet, and the construction of two docks, with piers, 200 feet wide, upon which grain elevators will be erected for the transference of grain to vessels adapted to the canal navigation, when required. In addition to the works undertaken by this department, a breakwater, about a mile in length, has been, and another is being, constructed across the entrance to the harbour by the Department of Public Works, which will also dredge out the area so contained; thus greatly increasing the accommodation, and insuring safety at this important point. The removal of the centre pier bridges on the canal, which obstructed navigation, is in progress, and new bridges spanning the entire channel are being erected. The deepening of portions of the canal prism is being carried on satisfactorily.

The work of deepening the approaches of the Sault Ste. Marie canal to 21 feet 5 inches is progressing. The approaches at the lower entrances are completed to that depth. The south lower entrance pier is being extended for a distance of 800 feet, and the work will probably be completed next season. A contract has been made for the work for a similar extension of 800 feet to the south upper entrance pier. With the completion of these two works, and possibly some levelling, sodding and tree and shrub planting of the canal grounds, in order to obtain an appearance of neatness such as that which characterizes the American canal opposite, the construction work of this canal will be finished.

The works on the Trent canal are satisfactorily advancing. The section, 9½ miles, comprising the new hydraulic lift lock at Ashburnham (Peterborough), was formally opened for traffic in June, 1904. The occasion was one of much interest, especially from an engineering point of view. The lock which, at a single operation, raises or lowers a vessel of the ordinary type, 800 tons capacity, in use on this canal, a distance of 65 feet in three minutes actual movement, proved to be completely successful. Not only is it the only lock of the character on this continent, but it is double the size of any of the three existing in Europe. A detailed description will be found as a note in the Chief Engineer's section of this report. A second hydraulic lift lock to overcome a rise and fall of 54 feet is projected for the Balsam-Simcoe Lake division of the canal.

When the present contracts are completed, a six foot navigation will be afforded from Lake Simcoe to Heely's Falls, a distance of about 160 miles, leaving the portion between Heely's Falls and Lake Ontario and the portion from the head of Lake Simcoe to Georgian bay, Lake Huron, still to be dealt with. The total distance between the Bay of Quinté, Lake Ontario and Georgian bay is about 192 miles.

The completion of the difficult work of constructing a channel 3,000 feet long, 300 feet wide, and with 17 feet of water, through the Galops rapids, which has, for some years past, been carried on, is now so near completion that it is expected that the current year will see it finished. In this connection there is being constructed a massive dam between Adam's island (Canadian) and Galops island, which is in the territory of the United States, in order to the removal of a cross current which affected the said new channel. In dealing with this matter, the department has received much courteous assistance from the United States authorities, who have facilitated the work in every way in their power.

During the years 1899 and 1900, under special appropriations voted by parliament, surveys were conducted on the Upper River Ottawa, with a view to ascertaining the feasibility and probable cost of constructing a canal system to give a navigation from Georgian bay down the river to Montreal, a scheme proposed many years ago and lately revived by private parties with considerable energy. The results of these surveys will be found in a special report from the engineer in charge, Mr. H. A. F. MacLeod, attached to an appendix to the annual report for the year 1900-1901.

His conclusions are that the canal can be constructed at an estimated cost, for a 14 foot navigation of $23,898,000, and for a 20 foot navigation of $72,627,000. The distance from Georgian bay to Montreal is set down at 430 miles. A further and more detailed survey is in progress under the Department of Public Works.

In the report of the chief engineer, and in the reports of the superintending engineers, will be found full details as to the operation of the various canals, and as to the progress and position of the works of enlargement and construction now being carried on.

I have the honour to be, sir,

Your obedient servant,

COLLINGWOOD SCHRIEBER,

Deputy Minister of Railways and Canals.

PART I

SKETCH MAPS OF DOMINION RAILWAYS AND CANALS

AND

REPORT OF THE CHIEF ENGINEER

COMPRISING REPORTS OF

GENERAL MANAGER OF GOVERNMENT RAILWAYS AND SUPERINTENDENTS OF CANALS

ALSO

DECISIONS OF THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL

1903—1904

DEPARTMENT OF RAILWAYS AND CANALS.

LIST OF ANNUAL REPORTS UNDER THIS COVER.

1. Collingwood Schreiber, Chief Engineer Railways and Canals, General.
2. D. Pottinger, General Manager Government Railways, I.C.R.
3. T. C. Burpee, Engineer of Maintenance, I.C.R.
4. W. B. McKenzie, Chief Engineer, I.C.R.
5. G. R. Joughins, Superintendent of Motive Power, I.C.R.
6. D. Pottinger, General Manager Government Railways, Windsor Branch.
7. T. C. Burpee, Engineer of Maintenance, Windsor Branch.
8. D. Pottinger, General Manager Government Railways, P.E.I. Railway.
9. G. A. Sharp, Superintendent P. E. I. Railway.
10. W. S. Poole, Mechanical Superintendent, P. E. I. Railway.
11. W. B. McKenzie, Chief Engineer, P. E. I. Railway.
12. E. Marceau, Superintending Engineer, Quebec Canals.
13. L. N. Rheaume, St. Lawrence Canals.
14. W. A. Stewart, Superintendent of Operation, St. Lawrence Canals.
15. A. J. Grant, Engineer in charge of Construction, Welland Canal.
16. J. L. Weller, Superintending Engineer, Welland Canal.
17. F. B. Fripp, Engineer in Charge, Sault Ste. Marie.
18. J. C. Boyd, Superintendent, Sault Ste. Marie.
19. R. B. Rogers, Superintending Engineer, Trent Canal.
20. A. T. Phillips, Superintending Engineer, Rideau Canal.
21. J. H. Devereaux, Lock Master, St. Peters Canal.
22. Collingwood Schreiber, Secretary, Railway Committee of Privy Council.

CHIEF ENGINEER'S REPORT.

Department of Railways and Canals,
Office of the Chief Engineer,
Ottawa, November 1, 1904.

Sir,—I have the honour to submit my annual report for the fiscal year ended June 30, 1904, covering, however, the works of construction up to October 1, 1904. Accompanying it are the following:—

First.—The annual report of the General Manager of Government Railways, to which are attached the report of the Chief Engineer, the Engineer of Maintenance, the Superintendent of Motor Power of the Intercolonial Division and the report of the Superintendent of Prince Edward Island Division, with statements of accounts prepared by the Accountants of these roads. (Part I.)

Second.—The annual reports of the Superintending Engineers of the several Canals, and of the Superintendents of the Sault Ste. Marie Canal, the St. Peter's Canal and of the St. Lawrence Canals. The engineer in charge of the improvements of the upper entrance of the Welland Canal and the engineer in charge of the improvements to the entrance to the Sault Ste. Marie Canal. (Part I.)

Third.—Proceedings before the Railway Committee of the Privy Council. (Part I.)

Fourth.—Financial Statements of the Accountant of the Department. (Part II.)

Fifth.—A statement of the condition of the subsidies granted in aid of the construction of railways; also a list of Railway Subsidy Acts. (Part III.)

Sixth.—Statement of contracts entered into during the year, prepared by Mr. Hansard (Part IV).

Seventh.—Statement of water powers and other public property leased by the department during the year, prepared by Mr. Hansard. (Part IV.)

Eighth.—Statement of property purchased or damaged during the year, prepared by Mr. Hansard. (Part IV.)

Ninth.—Agreements respecting subsidies in aid of construction of railways entered into during the year, prepared by Mr. Hansard. (Part IV.)

Tenth.—The Canal Statistics for the season of navigation of 1903, compiled by Mr. Devlin. (Part V.)

Eleventh.—The Railway Statistics for the year ended June 30, 1904, compiled by Mr. Ridout from returns prepared by the Railway Companies. (Part VI.)

The following shows the length of the government railways in operation on June 30, 1904:—

INTERCOLONIAL RAILWAY.

MAIN LINE AND BRANCHES.

	Miles.
Montreal to Halifax, via Lévis	837
Moncton to St. John	89
Truro to Sydney	213
Oxford Junction to Pictou	69
St. Charles Junction to Chaudière Curve, via St. Henri	17
Rivière Ouelle Branch	6·25
Dalhousie Junction to Dalhousie	7
Derby Junction to Indiantown	14
Painsec Junction to Point du Chêne	12
Pugwash Junction to Pugwash	5
Stellarton Junction to Brown's Point	12
North Sydney Junction to North Sydney	5
New Glasgow to Pictou Landing	8
Dartmouth Branch	13
Nicolet Branch	14·76
	1,322·01

FREIGHT BRANCHES.

	Miles.	
Rivière du Loup Wharf Branch	4	
Rimouski "	2	
Newcastle "	2	
Dorchester "	1	
Courtney Bay "	1	
Sackville "	·50	
Stewiacke "	1	
Halifax Cotton Factory Branch	1	
		12·50
Total		1,334·51

WINDSOR BRANCH.

Windsor Junction to Windsor	32

PRINCE EDWARD ISLAND RAILWAY.

Souris to Tignish	167	
Mount Stewart to Georgetown	24	
Charlottetown to Royalty Junction	5	
Emerald Junction to Cape Traverse	13	
Alberton to Cascumpec Wharf	1	
		210
Total length of government railways		1,576 51

The result of the year's operations of the government railways may be stated as follows :—

Name of Railway.	Mileage in Operation	Amount.		Profit.	Loss.
			$ cts.	$ cts.	$ cts.
Intercolonial Division	1,301	Working expenses	7,239,982 04		
		Earnings	6,339,231 43		
					900,750 61
Windsor Branch	32	One-third earnings	53,634 05		
		Maintenance	24,281 09		
				29,352 96	
Prince Edward Island Division	210	Working expenses	335,695 44		
		Earnings	234,390 03		
					101,305 41
Total miles	1,543			29,352 96	1,002,056 02
		Deduct profit from loss			29,352 96
		Net loss			972,703 06

The maintenance of the roads and rolling stock has received careful attention, and both roads continue to be in efficient condition; the rolling stock is being brought up to the modern standard.

The working expenses of the Intercolonial Railway given above include the $140,000 rental paid to the Grand Trunk Railway.

The gross earnings of the government railways for the last two years compare as follows:—

	1902-1903.	1903-1904.
Intercolonial Division	$6,324,323 72	$6,339,231 43
Windsor Branch	42,560 81	53,634 05
Prince Edward Island Division	217,714 24	234,390 03
	$6,584,598 77	$6,627,255 51

Showing an increase in the gross earnings of $42,656.74.

The gross working expenses of the government railways for the last two years compare as follows:—

	1902-1903.	1903-1904.
Intercolonial Division	$6,196,653 19	$7,239,982 04
Windsor Branch	17,843 19	24,281 09
Prince Edward Island Division	259,637 82	335,695 44
Total	6,474,134 20	$7,599,958 57

Gross working expenses of government railways	$7,599,958 57
Gross earnings of government railways	6,627,255 51
Excess of working expenses, which include rental, $140,000, over earnings	$ 972,703 06

Showing an increase in working expenses for the year, compared with the previous year, of $1,125,824.37, which is made up of the following:—

	1902-1903.	1903-1904.	Difference.	
			Increase.	Decrease.
	$ cts.	$ cts.	$ cts.	$ cts.
Locomotive power	2,249,212 81	2,732,396 72	483,183 91	
Car expenses	1,388,805 73	1,762,273 89	373,468 16	
Maintenance of way and works	1,485,545 61	1,619,780 67	134,235 06	
Station expenses	831,650 91	922,528 95	92,878 04	
General charges	490,355 29	533,529 51	43,174 22	
Rental of leased lines	140,000 00	140,000 00	Nil.	Nil.
	6,585,570 35	7,712,509 74	1,126,939 39	
Deduct car mileage	111,436 15	112,551 17		
Net increase	6,474,134 20	7,599,958 57	1,125,824 37	

INTERCOLONIAL DIVISION.

The ocean passenger and freight traffic via the port of Halifax shows a considerable increase for the winter season of 1903-4, as compared with the previous winter season.

COMPARATIVE Statement of Ocean-borne Passenger Business done at the Port of Halifax during the Winter Seasons of 1902-3 and 1903-4.

Name of Steamer.	1902-1903. No. of Passengers.			Name of Steamer.	1903-1904. No. of Passengers.		
	1st Class.	2nd Class.	Total.		1st Class.	2nd Class.	Total.
Pretorian	176	1,271	1,447	Pretorian	61	1,351	1,412
Parisian	216	1,506	1,722	Parisian	101	1,399	1,500
Bavarian	198	2,033	2,231	Bavarian	175	2,314	2,689
Corinthian	139	1,543	1,682	Corinthian	29	578	607
Armenian		3,277	3,277	Cambroman	Nil.	52	52
Siberian	5	1,086	1,091	Siberian	11	556	567
Mongolian	26	726	752	Mongolian	Nil.	502	502
Corean		489	489	Corean	5	165	170
Assyrian		2,944	2,944	Assyrian	Nil.	837	837
Numidian	71	1,758	1,829	Numidian	26	803	829
Arcadian		971	971	Arcadian	Nil.	1,945	1,945
Canada	76	1,634	1,710	Canada	81	1,314	1,395
Carthaginian	2	1,110	1,112	Carthaginian	22	393	415
Tunisian	383	2,972	3,355	Tunisian	248	2,868	3,116
Sardinian		501	501	Sardinian	Nil.	260	260
Laurentian	20	616	636	Laurentian	24	823	847
Pomeranian	1	510	511	Pomeranian	1	372	373
Lake Champlain	61	1,306	1,367	Lake Champlain	169	825	994
Adria		1,090	1,090	Ionian	115	1,661	1,776
Bulgaria		2,204	2,204	Dominion	27	731	758
Sicilian	4	16	20	Sicilian	20	802	822
				Pallanza	Nil.	138	138
				Barcelona	Nil.	1,508	1,508
				Kensington	Nil.	913	913
				Buenos Ayrean	Nil.	39	39
				Sarmatian	Nil.	277	277
				Southwark	Nil.	512	512
				Malou	Nil.	191	191
*Total	1,378	29,563	30,941	Total	1,115	24,329	25,444

*NOTE.—Of the above 29,315 travelled by the Canadian Pacific Railway, and 1,626 travelled by the Intercolonial Railway.

Of the 25,444 passengers carried by the Intercolonial Railway in 1903-04 as above, 17,237 travelled via St. John by the Canadian Pacific Railway, and 2,125 travelled by the Intercolonial Railway to Montreal.

COMPARATIVE Statement of Ocean-borne Freight Traffic during the Winter Seasons of 1902-3 and 1903-4.

Name of Line of Steamers.	WINTER OF 1902-1903.			Name of Line of Steamers.	WINTER OF 1903-1904.		
	Measurement tons.	Weight tons.	Total tons.		Measurement tons.	Weight tons.	Total tons.
Furness-Allan	Nil.	Nil.	Nil.	.....	.....	.....	.....
Allan Line.. . .	3,962	2,530	6,492	Allan Line.....	11,203	4,095	15,298
Furness Line..	4,339	8,445	12,784	Furness Line..	4,599	8,754	13,353
Elder-Dempster...	Nil.	Nil.	Nil.	Canada-Jamacia Steamship Line	.....	40	40
Pickford and Black	152	1,786	1,938	Pickford and Black	Nil.	Nil.	Nil.
Beaver Line.....	Nil.	Nil.	Nil.	Red Cross Line. ..	Nil.	879	879
Total	8,453	12,761	21,214	Total.	15,802	13,768	29,570

The above statement shows an increase of 8,356 tons of ocean-borne freight traffic for the winter season of 1903-4 as compared with the winter season of 1902-3.

The following is a statement of the quantity and classes of the rolling stock purchased on capital account up to June 30, 1904 :—

	Engines.	Dining cars.	PASSENGER CAR STOCK.					Conductor's van.	Oil tank cars.	Box, cattle and refrigerator cars.	Platform cars.	Coal cars of 3 several kinds.	Snow ploughs.	Wing ploughs.	Flangers.	Rotary snow ploughs.	Auxiliary cars.	Air Brake Instruction car.
			1st class sleeping and parlour.	1st class.	2nd class sleepers.	2nd class.	Baggage and mail postal.											
	... ..	....	...	....	.. .	.. .	...	....	5,486	.....	999	....	....	...	..	....	....	
	302	7	31	117	31	93	50	99	....	123	2,686	54	49	10	22	2	19	1
	... ..		5	....	.. .	....	32	....	15	84	.....	542	....	....	....	..	....	...
Total...	302	7	36	117	31	93	82	99	15	5,693	2,686	1,595	49	10	22	2	19	1

NOTE—51 coal cars have been converted into platform cars.

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The following is a statement of the quantity and classes of rolling stock which have been rebuilt during the year ended June 30, 1904, at the cost of revenue to maintain the work :—

—	Engines.	Passenger Car Stock. 1st class sleeping and parlour.	1st class.	2nd class sleepers.	2nd class.	Baggage and express.	Conductor's van.	Box cars.	Platform cars.	Refrigerator cars.	Coal cars of three several kinds.	Snow ploughs.	Wing ploughs.	Flangers.	Rotary snow ploughs.
Total	8					3	8	255	137	8	54				

The following table shows the working expenses, gross earnings, the tonnage of freight and number of passengers carried each year since July 1, 1876, when the road was first opened as a through line to the west.

Year.	Average Miles in Operation.	Working Expenses.	Gross Earnings.	Profit.	Loss.	Tons of Freight carried.	No. of Passengers carried.
		$ cts.	$ cts.	$ cts.	$ cts.		
1876–77	714	1,661,673 55	1,154,445 33		507,228 22	421,327	613,420
1877–78	714	1,816,273 56	1,378,946 78		432,326 78	522,710	518,957
1878–79	714	2,010,183 22	1,294,009 69		716,083 53	510,861	640,101
1879–80	829	1,603,429 71	1,506,298 48		97,131 23	561,924	581,483
1880–81	840	1,759,851 27	1,760,393 92	542 65		725,777	631,245
1881–82	840	2,069,657 48	2,079,262 66	9,605 18		838,956	779,994
1882–83	840	2,360,373 27	2,370,910 10	10,547 83		970,961	878,660
1883–84	887	2,377,433 62	2,384,414 92	6,981 30		1,009,237	944,636
1884–85	941	2,519,751 56	2,441,203 66		78,547 90	989,986	957,228
1885–86	946	2,583,999 67	2,450,993 88		133,965 79	1,023,788	932,880
1886–87	977	2,922,369 62	2,660,116 93		262,252 69	1,143,020	942,784
1887–88	971	3,366,781 74	2,983,336 05		383,445 69	1,288,823	1,040,163
1888–89	971	3,244,647 73	2,967,801 00		276,847 73	1,218,877	1,136,272
1889–90	971	3,560,575 74	3,012,739 87		847,835 87	1,368,819	1,219,233
1890–91	1,094	3,662,341 94	2,977,395 38		684,946 56	1,304,534	1,298,304
1891 92	1,142	3,439,377 00	2,945,441 97		493,935 03	1,264,575	1,297,732
1892–93	1,142	3,045,317 50	3,065,499 09	20,181 59		1,388,080	1,292,878
1893–94	1,142	2,981,671 98	2,987,510 27	5,838 29		1,342,710	1,301,062
1894–95	1,142	2,936,902 74	2,940,717 95	3,815,21		1,276,816	1,352,667
1895–96	1,142	3,012,827 62	2,957,640 10		55,187 52	1,379,618	1,471,866
1896–97	1,145	2,925,968 67	2,866,028 02		59,940 65	1,296,028	1,501,690
1897–98	1,201	3,327,648 51	3,117,669 85		209,978 66	1,424,576	1,523,444
*1898–99	1,301	3,675,686 21	3,738,331 44	62,645 43		1,750,761	1,603,095
*1899–1900	1,301	4,431,404 69	4,552,071 71	120,667 02		2,151,208	1,791,754
*1900–01	1,301	5,460,422 64	4,972,235 87		488,186 77	2,111,310	2,025,295
*1901 02	1,301	5,574,563 30	5,671,385 91	96,822 61		2,385,816	2,186,226
*1902–03	1,315	6,196,653 19	6,324,323 72	127,670 53		2,790,737	2,404,230
*1903–04	1,321	7,239,982 04	6,339,231 43		900,750 61	2,664,149	2,663,156

* The working expenses include the rental paid for leased line.

INTERCOLONIAL RAILWAY.

STATEMENT of Earnings from the several sources named from June 30, 1876, to June 30, 1904.

Year.	Miles in operation.	Passenger traffic.	Freight traffic.	Mails and sundries.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.
1876-77	714	460,368 15	607,564 99	86,512 21	1,154,443 33
1877-78	714	475,256 82	801,709 82	101,985 07	1,378,946 78
1878-79	714	451,893 29	753,490 85	88,715 55	1,294,009 69
1879-80	829	490,338 66	915,486 50	100,473 32	1,506,298 48
1880-81	840	545,114 48	1,113,872 21	101,407 23	1,760,393 92
1881-82	840	651,296 94	1,303,495 00	124,470 72	2,079,262 66
1882-83	840	741,992 72	1,487,601 98	141,326 40	2,370,910 10
1883-84	887	775,783 77	1,461,390 37	147,240 78	2,384,414 92
1884-85	941	747,585 13	1,542,052 18	151,566 35	2,441,203 66
1885-86	946	765,900 03	1,523,487 72	160,706 13	2,450,093 88
1886-87	977	828,328 28	1,677,971 59	153,817 06	2,660,116 93
1887-88	971	884,448 07	1,932,877 85	166,010 13	2,983,336 05
1888-89	971	906,246 47	1,909,094 44	152,460 09	2,967,801 00
1889-90	971	895,094 53	1,964,646 86	152,998 48	3,012,739 87
1890-91	1,094	962,316 88	1,854,629 88	160,448 62	2,977,395 38
1891-92	1,142	961,427 94	1,803,529 03	180,485 00	2,945,441 97
1892-93	1,142	1,002,912 74	1,868,823 84	194,468 80	3,065,499 09
1893-94	1,142	958,915 13	1,834,126 34	193,762 51	2,987,502 27
1894-95	1,142	963,914 44	1,782,608 54	194,194 97	2,940,717 95
1895-96	1,142	971,426 26	1,788,813 18	197,400 66	2,957,640 10
1896-97	1,145	979,005 57	1,687,050 42	199,972 03	2,866,028 02
1897-98	1,201	1,053,864 64	1,857,740 06	206,065 15	3,117,669 85
1898-99	1,315	1,167,453 16	2,348,096 58	222,781 70	3,738,331 44
1899-00	1,315	1,404,469 87	2,912,790 52	234,811 32	4,552,071 71
1900-01	1,315	1,607,166 79	3,121,006 15	244,062 93	4,972,235 87
1901-02	1,315	1,770,941 13	3,644,513 42	255,931 36	5,671,385 91
1902-03	1,315	1,927,916 97	4,128,255 00	268,151 75	6,324,323 72
1903-04	1,321	2,021,568 40	4,041,122 48	276,540 55	6,339,231 43

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INTERCOLONIAL RAILWAY.

STATEMENT showing the Number of Tons of Local and Through Freight Carried from June 30, 1876, to June 30, 1904.

Year.	Miles in operation.	Local freight.	Through freight.	Total.
1876-7	714	The information for these years was destroyed when the general offices in Moncton were burned.		421,327
1877-8	714			522,710
1878-9	714			510,861
1879-0	829			561,924
1886-1	840			725,777
1881-2	840	571,684	267,272	838,956
1882-3	840	537,025	443,936	970,961
1883-4	887	584,581	424,656	1,609,237
1884-5	941	506,574	483,362	989,936
1885-6	946	580,076	443,712	1,023,788
1886-7	977	633,455	509,565	1,143,020
1887-8	971	727,599	561,224	1,288,823
1888-9	971	624,436	594,441	1,218,877
1889-0	971	756,696	612,123	1,368,819
1890-1	1,094	797,492	507,042	1,304,534
1891-2	1,142	750,783	513,792	1,264,575
1892-3	1,142	1,030,628	357,452	1,388,080
1893-4	1,142	966,114	376,596	1,342,710
1894-5	1,142	901,374	366,442	1,267,816
1895-6	1,142	1,011,229	368,389	1,379,618
1896-7	1,145	927,167	368,859	1,296,028
1897-8	1,201	1,053,569	381,007	1,434,576
1898-9	1,315	1,351,569	399,192	1,750,761
1899-0	1,315	1,713,928	437,280	2,151,208
1900-1	1,315	1,633,671	477,639	2,111,310
1901-2	1,315	1,914,551	471,265	2,385,816
1902-3	1,315	2,239,993	550,744	2,790,737
1903-4	1,321	2,123,261	540,888	2,664,149

NOTE.—According to this table, the Through Freight business appears to be less than 17 years ago. This is explained by Montreal having become a local station after the I. C. Ry. was extended to that city. Another cause is the opening of the C. P. Ry. to St. John.

INTERCOLONIAL RAILWAY.

STATEMENT of the Number of Local and Through Passengers carried from June 30, 1876, to June 30, 1904.

Year.	Miles in Operation.	Number of Local Passengers.	Number of Through Passengers.	Total.
1876–7	714	The information for these years was destroyed when the general offices in Moncton were burned.		613,420
1877–8	714			618,957
1878–9	714			640,101
1879–00	829			581,483
1880–1	840			631,245
1881–2	840	647,534	132,460	779,994
1882–3	840	728,186	150,414	878,600
1883–4	887	784,715	159,921	944,636
1884–5	941	812,028	145,200	957,228
1885–6	946	784,817	148,063	932,880
1886–7	977	814,032	128,752	942,784
1887–8	971	948,324	91,839	1,040,163
1888–9	971	1,050,592	85,680	1,136,272
1889–00	971	1,112,695	91,531	1,219,233
1890–1	1,094	1,203,814	94,490	1,298,304
1891–2	1,142	1,198,649	99,083	1,297,732
1892–3	1,142	1,188,827	104,051	1,292,878
1893–4	1,142	1,216,027	85,035	1,301,062
1894–5	1,142	1,272,284	80,383	1,352,667
1895–6	1,142	1,386,803	85,063	1,471,866
1896–7	1,145	1,416,631	85,059	1,501,690
1897–8	1,201	1,438,590	89,854	1,523,444
1898–9	1,315	1,504,652	98,443	1,603,095
1899–1900	1,315	1,678,858	112,896	1,791,754
1900–1	1,315	1,905,599	119,696	2,025,295
1901–2	1,315	2,061,196	125,030	2,186,226
1902–3	1,315	2,255,013	149,217	2,404,230
1903–4	1,321	2,447,843	215,313	2,663,156

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The following table shows the number of tons of coal carried over the Intercolonial Railway from the Nova Scotia collieries to Ste. Rosalie, Montreal and St. John for points west thereof, and to local stations in each year since the road was opened as a through line :—

Year.	For the West.			To Local Stations.	Total.
	Via Ste. Rosalie.	Via Montreal.	Via St. John.		
1876-77				103,420	103,420
1877-78				97,043	97,043
1878-79		300		112,232	112,532
1879-80		1,097		135,369	136,466
1880-81		9,102	4,022	174,483	184,607
1881-82		18,015	11,779	218,364	248,158
1882-83		12,837	22,206	227,380	262,423
1883-84		22,014	19,534	252,014	293,562
1884-85		133,440	1,773	213,791	349,004
1885-86		171,170	21,150	215,272	407,592
1886-87		192,871	27,536	233,178	453,585
1887-88		183,704	36,228	309,727	529,659
1888-89		160,026	27,923	338,538	526,487
1889-90		164,453	25,126	366,967	556,546
1890-91		113,996	39,213	344,829	498,038
1891-92		35,447	5,918	392,441	433,806
1892-93		136,868	3,775	402,653	543,296
1893-94		102,273	8,028	367,390	478,691
1894-95		67,082	7,865	310,253	385,200
1895-96		53,124	9,681	369,708	432,513
1896-97		38,395	12,305	331,469	382,172
1897-98		9,084	9,796	351,069	369,949
1898-99		4,644	5,399	484,163	494,206
1899-1900		3,495	Nil.	599,714	603,289
1900-01	136	Nil.	Nil.	506,454	506,590
1901-02	1,131	5,763	3,640	546,986	557,520
1902-03	2,200	7,817	6,775	725,727	742,519
1903-04	2,260	637	513	691,346	694,761

It thus appears that the largest tonnage of coal carried over the road for the west was in the year 1886-7, when it reached 220,407 tons, since which the through coal traffic for points west of the Intercolonial Railway has greatly declined.

TABLE showing the number of bushels of grain carried during each year for shipment at Halifax since the road was opened as a through line to the west.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-77				1890-91	148,803	59,534	218,337
1877-78				1891-92	845,997	519,500	1,265,497
1878-79				1892-93	155,306	197,669	352,975
1879-80				1893-94	Nil.	8,026	8,026
1880-81				1894-95	Nil.	Nil.	Nil.
1881-82				1895-96	Nil.	Nil.	Nil.
1882-83	31,011		31,011	1896-97	Nil.	Nil.	Nil.
1883-84	73,389		73,389	1897-98	8,000	Nil.	8,000
1884-85	300,901		300,901	1898-99	30,000	Nil.	30,000
1885-86	389,122		389,122	1899-1900	13,239	Nil.	13,239
1886-87	575,880		575,880	1900-01	147	Nil.	147
1887-88	69,021		69,021	1901-02	Nil.	Nil.	Nil.
1888-89	129,725		129,725	1902-03	Nil.	Nil.	Nil.
1889-90	502,012		502,012	1903-04	147,438	Nil.	147,438

TABLE showing the number of barrels of flour and meal carried during each year since the road was first opened as a through line to the west.

Year.	Barrels.	Year.	Barrels.
1876-77	254,710	1890-91	1,013,129
1877-78	557,778	1891-92	954,015
1878-79	620,329	1892-93	856,913
1879-80	535,248	1893-94	944,967
1880-81	672,310	1894-95	938,351
1881-82	692,095	1895-96	822,097
1882-83	983,916	1896-97	847,701
1883-84	817,134	1897-98	987,408
1884-85	935,977	1898-99	1,157,250
1885-86	761,127	1899-1900	1,234,076
1886-87	763,894	1900-01	1,292,106
1887-88	871,838	1901-02	1,311,707
1888-89	948,514	1902-03	1,521,540
1889-90	1,116,050	1903-04	1,607,050

TABLE showing the number of bushels of grain carried during each year since the road was first opened as a through line to the west.

Year.	Bushels.	Year.	Bushels.
1876-77	292,852	1890-91	2,890,921
1877-78	331,170	1891-92	3,776,677
1878-79	302,921	1892-93	1,514,619
1879-80	534,021	1893-94	1,304,684
1880-81	565,678	1894-95	1,036,384
1881-82	560,253	1895-96	1,064,385
1882-83	1,195,601	1896-97	1,093,499
1883-84	654,673	1897-98	1,551,372
1884-85	734,902	1898-99	2,595,353
1885-86	849,800	1899-1900	2,720,453
1886-87	1,018,395	1900-1901	3,535,364
1887-88	1,219,035	1901-02	2,959,761
1888-89	1,256,158	1902-03	3,392,252
1899-90	2,610,202	1903-04	2,788,772

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TABLE showing the quantity of lumber in feet carried during each year over the road since it was first opened for traffic as a through line to the west.

Year.	Feet.	Year.	Feet.
1876-77	50,096,474	1890-91	184,188,324
1877-78	56,626,547	1891-92	175,474,340
1878-79	55,626,696	1892-93	181,211,013
1879-80	55,462,654	1893-94	200,507,949
1880-81	72,841,388	1894-95	202,247,269
1881-82	78,356,418	1895-96	226,332,715
1882-83	104,633,417	1896-97	243,355,725
1883-84	131,120,948	1897-98	354,093,816
1884-85	138,493,675	1898-99	306,554,031
1885-86	117,186,512	1899-1900	379,350,074
1886-87	161,801,763	1900-1901	396,858,964
1887-88	197,755,272	1901-02	428,051,029
1888-89	199,507,777	1902-03	459,231,589
1889-90	210,886,071	1903-04	465,379,803

TABLE showing the number of live stock carried during each year over the road since it was first opened for traffic as a through line to the west.

Year.	Number.	Year.	Number.
1876-77	34,414	1890-91	95,529
1877-78	46,498	1891-92	87,889
1878-79	47,584	1892-93	93,369
1879-80	70,990	1893-94	79,203
1880-81	61,574	1894-95	72,106
1881-82	73,479	1895-96	64,051
1882-83	68,338	1896-97	72,082
1883-84	60,090	1897-98	89,301
1884-85	70,785	1898-99	109,821
1885-86	74,498	1899-1900	92,813
1886-87	82,896	1900-01	95,923
1887-88	98,302	1901-02	98,495
1888-89	85,960	1902-03	127,060
1889-90	80,771	1903-04	113,006

TABLE showing the number of tons of ocean-borne goods to and from Europe, via the port of Halifax, carried over the road during each year since it was first opened for traffic as a through line.

Year.	Via Ste. Rosalie and from the West.	Via Montreal to and from the West.	Via St. John to and from the West.	To and from local Stations.	Total.
1876-77					
1877-78		14,949		3,405	18,354
1878-79		21,628		2,643	24,271
1879-80		21,073		4,952	26,025
1880-81		15,454		3,334	18,788
1881-82		21,607		4,168	25,775
1882-83		24,875		7,911	32,786
1883-84		19,696		6,533	26,229
1884-85		22,787		8,405	31,192
1885-86		13,464		8,216	21,680
1886-87		16,923		9,811	26,734
1887-88		41,864		8,878	50,742
1888-89		17,340		11,481	28,821
1889-90		9,895		11,730	21,625
1890-91		9,923		10,764	20,687
1891-92		9,719	17	23,835	33,571
1892-93		7,295	100	12,319	19,714
1893-94		3,023	204	13,455	16,682
1894-95		6,749	213	10,399	17,361
1895-96		3,767	314	16,748	20,829
1896-97		2,654	263	17,239	20,156
1897-98		5,950	1,637	18,633	26,220
1898-99		2,465	243	31,555	34,263
1899-1900		2,379	307	37,108	39,794
1900-01	322	6,860	1,142	155,514	163,838
1901-02	1,106	7,780	1,528	172,733	183,147
1902-03	817	11,925	1,194	124,695	138,631
1903-04	2,079	21,377	2,994	146,070	174,520

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TABLE showing the number of tons of raw and refined sugar carried over the road during each year since it was first opened as a through line.

Year.	Raw Sugar.					Refined Sugar.				
	Via Ste. Rosalie.	To Montreal for the West	To St. John for the West.	To Local Stations	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876–77		340			340					
1877–78		186			186					
1878–79		1,041			1,041					
1879–80		12,220			12,220					
1880–81		13,872			13,872		4,022		2,902	6,924
1881–82		14,256		1,290	15,546		7,146		3,607	10,753
1882–83		9,465		508	9,973		11,126		5,497	16,623
1883–84		13,778		3,068	16,846		14,543		7,265	21,808
1884–85		10,381		3,661	14,042		18,024		8,445	26,469
1885–86		4,394		3,998	8,392		7,674		5,858	13,518
1886–87		20,450		8,500	28,950		15,044		8,395	23,439
1887–88		14,320		14,085	28,405		21,641		7,133	28,774
1888–89		24,358		7,160	31,518		12,955		11,120	24,075
1889–90		7,390		8,913	16,303		6,778		6,125	12,903
1890–91		5,088	4,670	8,215	17,973		10,130	468	5,996	16,594
1891–92		7,142	3,960	10,535	21,637		12,633	7,647	12,414	32,721
1892–93		Nil.	Nil.	10,137	10,137		8,327	6,456	7,840	22,623
1893–94		Nil.	Nil.	6,775	6,775		17,729	6,967	8,885	33,581
1894–95		Nil.	Nil.	10,342	10,342		13,351	15,819	4,695	33,865
1895–96		Nil.	Nil.	9,824	9,824		15,138	13,734	11,309	40,181
1896–97		Nil.	Nil.	4,925	4,925		5,694	8,069	6,957	20,720
1897–98		Nil.	Nil.	Nil.	Nil.		6,624	8,821	10,989	26,534
1898–99		Nil.	Nil.	Nil.	Nil.		8,138	2,193	15,833	26,164
1899–1900		96	Nil.	Nil.	96		9,795	257	19,655	29,907
1900–01		489	Nil.	Nil.	489	403	14,791	12	10,615	25,821
1901–02		90	Nil.	11,553	11,643	3,101	6,831	861	18,839	29,632
1902–03		194	Nil.	17,137	17,331	3,183	5,763	1,636	20,529	31,111
1903–04	357	875	Nil.	7,495	8,727	6,013	8,628	879	29,400	44,920

TABLE showing the number of tons of fresh and salt fish carried over the road during each year since it was opened as a through line.

Year.	Fresh Fish.					Salt Fish.				
	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations.	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876–77	.....	530	921	527	1,978	.....	551	1,848	802	3,201
1877–78	.....	596	1,015	474	2,085	.....	898	1,644	805	3,347
1878–79	.....	471	1,336	817	2,624	.....	988	1,038	1,048	2,974
1879–80	.....	519	1,362	453	2,334	.....	1,612	2,238	959	4,809
1880–81	.....	498	1,879	920	3,297	.....	2,418	937	1,051	4,406
1881–82	.....	475	1,619	957	3,051	.....	4,031	1,066	2,487	7,584
1882–83	.....	542	384	393	1,319	.....	3,229	759	1,354	5,412
1883–84	.....	838	1,682	412	2,932	.....	1,322	1,143	1,224	3,689
1884–85	.....	1,062	1,885	484	3,431	.....	3,563	3,600	1,596	8,759
1885–86	.....	1,669	1,645	902	4,216	.....	1,689	2,047	3,376	7,103
1886–87	.....	1,278	1,572	2,008	4,858	.....	3,236	569	1,747	5,552
1887–88	.....	1,533	1,477	1,031	4,041	.....	2,617	476	1,099	4,193
1888–89	.....	2,474	2,000	1,870	6,344	.....	3,070	7,746	2,994	13,810
1889–90	.....	2,235	1,787	2,111	6,223	.....	2,449	847	3,288	6,584
1890–91	.....	2,029	2,788	1,848	6,665	.....	1,953	1,917	3,236	7,106
1891–92	.....	1,367	1,746	547	3,660	.....	1,946	928	1,889	4,763
1892–93	.....	1,683	1,875	3,340	6,898	.....	3,262	1,811	2,176	7,249
1893–94	.....	1,959	2,192	2,224	6,375	.....	2,921	1,814	2,962	7,697
1894–95	.....	2,006	3,726	1,160	6,892	.....	2,075	1,849	5,285	10,209
1895–96	.....	1,966	3,059	1,319	6,344	.....	1,863	1,087	2,791	5,741
1896–97	.....	3,307	3,115	1,286	7,708	.....	2,168	1,176	2,536	5,880
1897–98	.....	3,575	3,703	1,052	8,330	.....	1,729	1,066	2,210	5,005
1898–99	.....	1,210	2,070	3,305	6,583	.....	1,651	1,198	3,625	5,474
1899–1900	.....	2,547	2,706	3,686	8,939	.....	2,421	1,563	2,659	6,643
1900–01	37	2,009	3,207	4,125	9,393	360	3,419	1,346	4,643	9,768
1901–02	219	3,013	4,373	5,477	13,082	283	3,150	1,413	5,196	10,042
1902–03	140	2,269	3,040	4,842	10,289	493	2,808	1,615	6,579	11,495
1903–04	539	1,939	3,588	5,002	11,068	225	2,359	564	5,848	8,996

206 miles of 57 lb. and 67 lb. rails were taken up and replaced by 162 miles of 80 lb. and 44 miles of 67 lb. rails; 644,683 ties and 156 sets of switch ties were renewed.

CAPITAL ACCOUNT.

Total cost of road and equipment up to June 30, 1904:—

Road, including $1,464,000 paid on account purchasing Drummond County Railway	$58,778,794 87
Rolling stock	13,957,140 93
Total	$72,735,935 80

The work of increased accommodation at the deep water terminus at Halifax is progressing, which facilitates the work of conducting the traffic.

Both the road and rolling stock have been efficiently maintained during the year.

The net results in the operation of this road are not as favourable as those of the year previous. Additions to the rolling stock continue to be made, as being a necessity for the efficient working of the traffic.

WINDSOR BRANCH.

This road continues to be operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company, the company receiving two-thirds of the gross earnings for working the traffic, and the government one-third of the gross earnings for maintaining the way and works.

This road has been maintained in efficient condition.

TABLE showing the earnings and its division between the Windsor Branch, and the Main Line of the Intercolonial Railway between Windsor and Halifax, the maintenance expenses and net earnings of the Windsor Branch for each year since 1880.

Year.	Miles in operation.	One-third gross earnings.	Proportion of one-third gross earnings credited to line Windsor Junction to Halifax.	Proportion of one-third gross earnings credited to the Windsor Branch.	Maintenance expenses.	Profit.	Loss.
		$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.
1880-81..	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	
1881-82..	32	28,461 07	7,407 88	21,052 19	13,099 55	7,953 64	
1882-83..	32	31,199 77	8,085 88	24,113 89	23,103 93	1,009 96	
1883-84..	32	30,428 39	7,409 46	23,018 93	22,140 86	878 07	
1884-85..	32	32,246 30	7,794 95	24,451 35	18,751 96	5,699 39	
1885-86..	32	31,185 63	7,527 52	23,658 11	19,229 49	4,428 62	
1886-87..	32	33,564 58	8,237 00	25,327 58	26,042 33		714 75
1887-88..	32	32,242 85	6,689 30	24,553 55	24,040 33	513 22	
1888-89..	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61	
1889-90..	32	39,544 19	9,381 73	30,162 46	18,982 82	11,179 64	
1890-91..	32	39,519 56	9,284 43	33,508 35	28,931 71	1,303 42	
1891-92..	32	42,891 23	9,382 38	30,235 13	19,514 37	13,994 48	
1892-93..	32	43,901 28	9,585 17	34,316 11	16,889 95	17,426 16	
1893-94..	32	41,834 70	8,859 23	32,975 47	17,645 09	15,330 38	
1894-95..	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	
1895-96..	32	47,456 74	10,894 91	36,561 83	16,476 46	20,985 37	
1896-97..	32	54,208 81	13,605 58	40,603 23	10,821 04	29,782 19	
1897-98..	32	48,892 21	11,665 57	37,226 64	18,181 09	14,045 01	
1898-99..	32	56,314 51	13,840 48	42,474 04	12,873 06	29,600 94	
1899-1900	32	62,266 61	14,925 18	47,351 43	12,891 56	34,459 87	
1900-01..	32	62,523 20	15,261 31	47,261 89	16,862 66	30,399 23	
1901-02	32	65,315 38	15,710 79	49,604 59	16,376 27	33,228 32	
1902-03..	32	56,417 38	13,856 57	42,560 81	17,843 19	24,717 62	
1903-04..	32	72,708 54	19,074 49	53,634 05	24,281 69	29,352 96	

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

The cost of road and rolling stock up to June 30, 1904 :—

Road, &c.	$5,544,192 68
Rolling stock	583,924 12
Total	$6,128,116 80

The rolling stock provided on capital account consisted of:—

Engines.	Passenger Car Stock.			Official cars.	Box, Cattle and Refrigerator cars.	Platform cars and Coal cars.	Conductors' vans.	Pay car.	Snow ploughs.	Flangers.
	1st class cars.	2nd class cars.	Baggage, smoking and postal.							
27	23	16	4	1	220	147	4	1	9	7
			3		21	20				
			4		1	.....				
			11		241	167				

The capital expenditure during the year amounted to $698,877.47, of which was expended on the construction of the Murray Harbour branch railway and on the Hillsboro' bridge $645,230.98.

Statement of rolling stock rebuilt during the year :—

Two locomotives, 1 platform car.

The following works are being carried on, on capital account:—

1. Bridge over the Hillsboro' river at Charlottetown, of which Mr. M. J. Haney is the contractor for the substructure, which work is well advanced. Total expenditure up to June 30, 1903 $ 735,101 99
   Expenditure from June 30, 1903, to June 30, 1904 418,982 76
   Total expenditure up to June 30, 1904 $1,154,084 75

2. Murray Harbour branch, of which Mr. Willard Kitchen is the contractor. Total expenditure up to June 30, 1903 $757,423 48
   Expended from June 30, 1903 to June 30, 1904 226,248 22
   Total expenditure up to June 30, 1904 $983,671 70

The following table shows the working expenses, the gross and net earnings, the tons of freight and number of persons carried each year since June 30, 1875, when the road was first opened for traffic :—

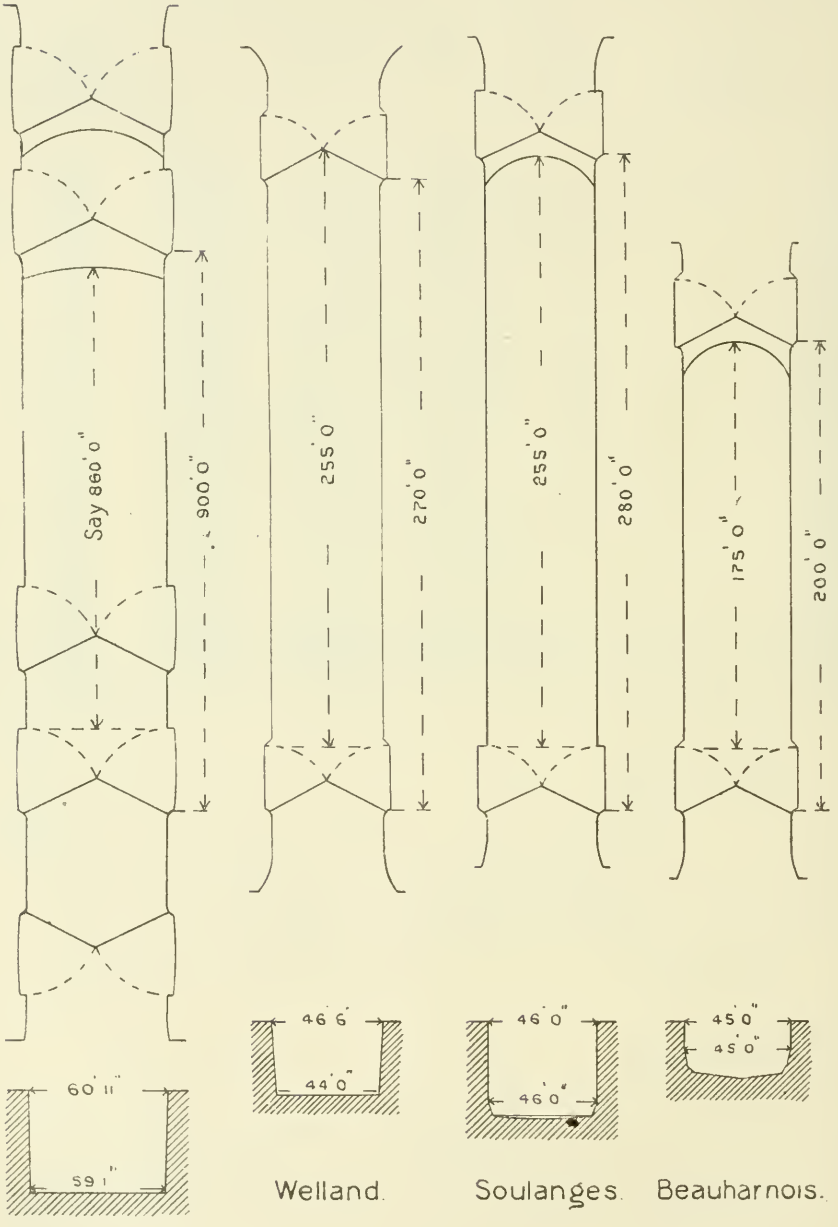
Year.	Miles in operation.	Working expenses.	Gross earnings.	Loss.	Tons of freight carried.	No. of passengers carried.
		$ cts.	$ cts.	$ cts.		
1875-76	199	214,930 43	118,060 96	96,869 47	28,358	93,964
1876-77	199	228,595 25	130,664 92	97,930 33	41,039	93,478
1877-78	199	221,599 49	135,899 60	85,699 89	38,668	111,428
1878-79	199	223,313 12	125,855 99	97,457 21	38,923	105,046
1879-80	199	164,640 55	113,851 11	50,789 44	37,208	90,533
1880-81	199	203,122 88	131,131 43	71,991 45	45,336	102,937
1881-82	199	228,259 97	137,267 54	90,922 43	48,315	118,436
1882-83	199	252,808 41	146,170 42	106,637 99	51,920	117,162
1883-84	199	236,428 13	144,504 12	91,924 01	51,841	118,988
1884-85	211	211,207 01	158,588 06	52,618 95	57,346	130,423
1885-86	211	216,744 34	155,584 36	61,159 98	57,913	120,374
1886-87	211	204,237 37	155,303 37	48,934 00	63,589	103,067
1887-88	211	229,639 95	158,365 62	71,276 33	59,603	131,246
1888-89	211	247,559 44	171,369 56	76,189 89	55,682	152,780
1889-90	211	266,485 85	160,971 78	105,514 07	51,604	133,099
1890-91	211	257,990 08	174,258 05	83,732 03	59,511	145,508
1891-92	211	289,706 38	157,442 69	132,263 69	51,065	139,389
1892-93	211	226,422 17	162,690 42	63,731 75	56,718	132,111
1893-94	211	226,891 06	158,533 83	68,857 23	53,577	123,727
1894-95	211	232,105 19	149,654 71	83,250 41	48,325	125,089
1895-96	211	225,138 56	146,476 54	78,662 02	46,395	122,586
1896-97	211	240,489 90	153,443 13	87,046 77	52,151	121,498
1897-98	211	231,418 74	158,950 61	72,468 13	57,339	126,510
1898-99	211	218,053 01	165,021 03	53,040 98	57,938	129,667
1899-1900	211	220,931 81	174,738 73	46,193 08	62,227	147,471
1900-01	211	261,766 24	193,833 48	67,883 76	73,696	157,793
1901-02	210	270,159 97	197,999 97	72,160 00	75,381	184,748
1902-03	209	259,637 82	217,714 24	41,923 58	80,582	205,265
1903-04	209	335,693 44	234,390 03	101,305 41	86,286	224,517

Steel rails (50 and 56 lb. to yard).. 205
Iron rails (40 lb. to yard).. 4

Total length of road.. 209

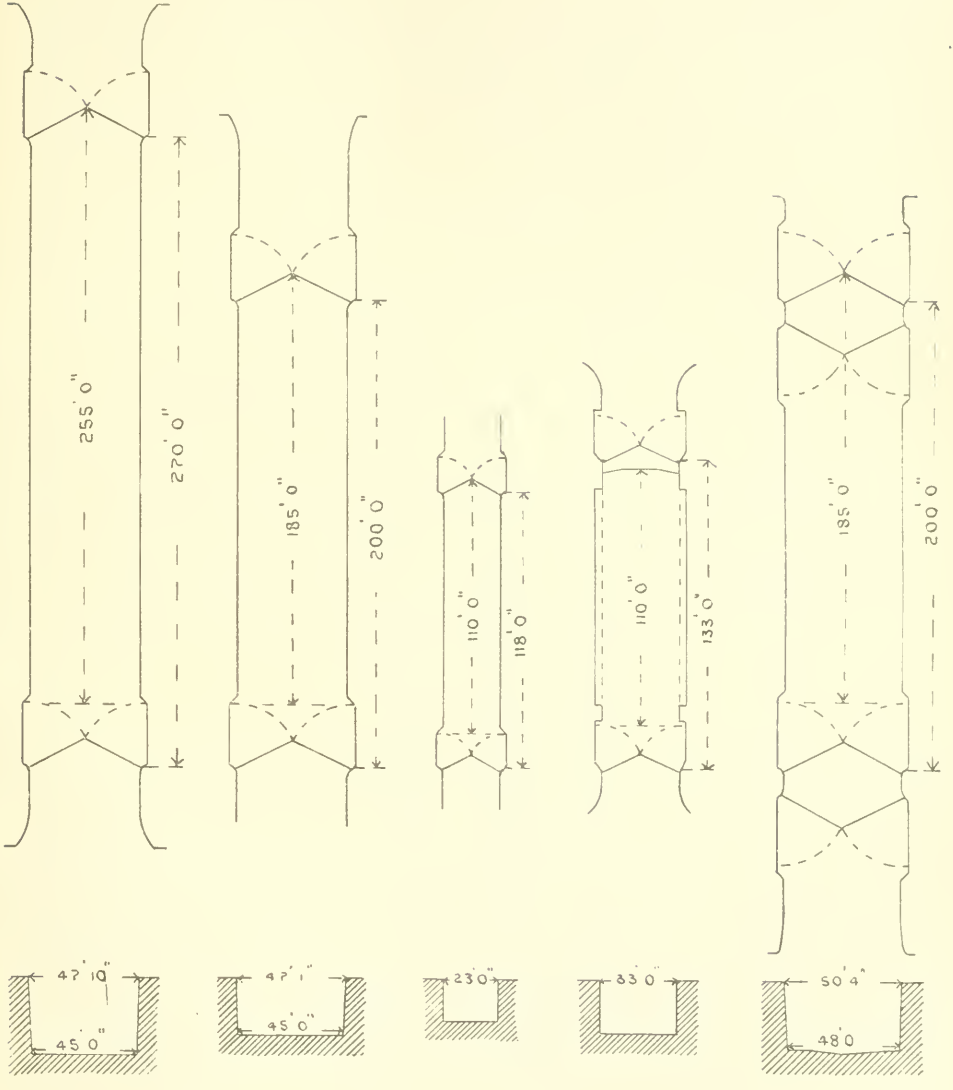
The road and rolling stock are in good running condition.

Plans and Sections showing the
on each of the Canadian Canal
Canal which is uncompleted.



There are no locks on the through
Montreal of less dimension than

dimensions of the smallest lock
Systems. Except the Trent

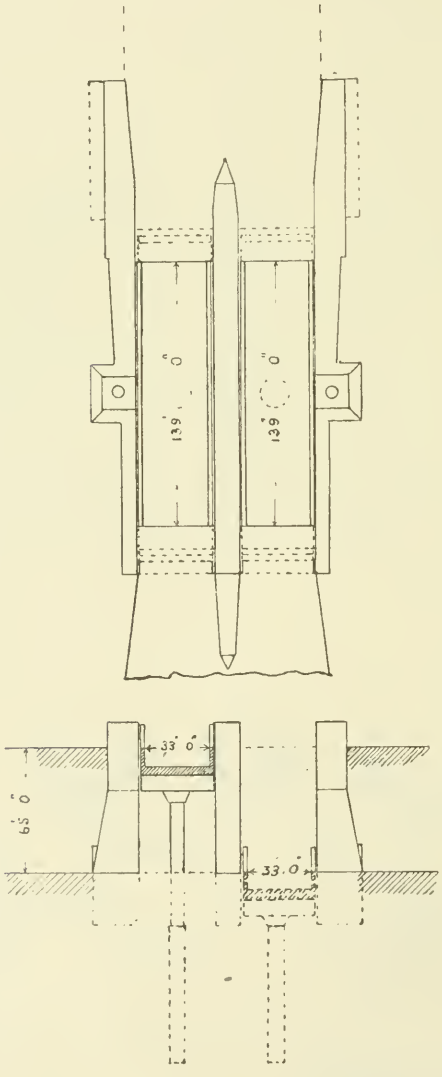


route between Lake Superior and
those of the Welland Canal locks.

TRENT CANAL

HYDRAULIC LIFT-LOCK AT PETERBOROUGH

— 65 Feet Lift —



CANALS.

The preceding diagrams of the locks on the Lachine, Soulanges, Welland and Sault Ste. Marie canals practically give the key to the whole navigation between Montreal and Lake Superior. There are no locks to be passed of less dimensions than those of the Welland canal.

The dimensions of the locks of the Beauharnois, Carillon and Grenville, St. Anne, Chambly, St. Ours, Rideau, Trent and St. Peter's are also shown.

CONSTRUCTION.

SOULANGES CANAL.

This canal extends from Coteau Landing to Cascades, a distance of 14 miles.

The works of construction of this canal are completed.

Total expenditure up to June 30, 1903..	$6,738,643 32
Expended during the year ended June 30, 1904.. ..	113,328 45
Total expenditure up to June 30, 1904..	$6,851,971 77
Expended from June 30, 1904, to October 1, 1904....	75 75
Total expended up to October 1, 1904.. ..'..	$6,852,047 52

There yet remains some further payments to be made.

SAULT STE. MARIE CANAL.

This canal is cut through St. Mary's island; it is 1½ miles in length. The depth of water on the mitre sill at low water is 20 feet 4 inches, 22 feet in the prism, 21 feet 5 inches in the lower entrance, with a minimum width of 315 feet. In the upper entrance there is only a depth of 18 feet of water at low water, but the work of deepening to 21 feet 5 inches is in progress. The Heckler Bros. have completed their contract for a portion of the work of deepening, and a contract has been recently entered into with Mr. Boone to continue the work of deepening and widening, which, when completed, will give safe pasage for vessels approaching and departing from the canal.

It having been found necessary to lengthen the entrance piers at each end of the canal, a contract has been entered into with Mr. Birmingham to extend south lower entrance pier 800 feet. The work is well advanced, but will not be completed until next season. For the extension of 800 feet to the south upper entrance pier, a contract has recently been entered into with Mr. Boyle, and he is making preparation to commence the work. Tenders are being invited for the erection of a small rest house for the men employed in operating the canal. When these works are brought to a finish the construction of the canal may be considered complete, unless, with a veiw to appearances of neatness and beauty, it is considered desirable to level up the grounds, lay them out in parterres, and plant them with trees and shrubs.

Total expenditure up to June 30, 1903.	$4,281,464 76
Expended from June 30, 1903, to June 30, 1904. . . .	32,029 54
Total expenditure up to June 30, 1904.	$4,313,494 30
Expenditure from June 30, 1904, to October 1, 1904. .	25,859 70
Total expenditure up to October 1, 1904.	$4,339,354 00

TRENT CANAL.

This canal is designed to extend from the waters of Lake Ontario to the Georgian bay on Lake Huron, at the mouth of the Severn river, the total distance being about 200 miles, of which 20 miles are canal and about 180 miles river and lake navigation.

Sections 1 and 2, on the Peterborough-Lakefield division, 9·61 miles, which were constructed by Messrs. Brown, Love & Aylmer and Messrs. Corry & Laverdure respectively, were opened for traffic on July 9 last, on which date the hydraulic lift lock at Peterborough was formally put in operation by the Hon. H. R. Emmerson, Minister of Railways and Canals, before a large gathering of people. Its operation was admirable, and it is a work that does credit to the resident engineers directly in charge of its construction, as well as to the contractors who carried it out, viz. : Messrs. Corry & Laverdure, the contractors for the substructure, and the Dominion Bridge Company, the contractors for the superstructure. The lock has a lift of 65 feet.

*NOTE—The two lock chambers, in which the vessels are raised or lowered, are steel basins measuring 140 by 33 feet, with a plating of 9 feet 10 inches deep. Those basins weigh about 400 tons each and when filled with water to the depth of 88 feet weigh 1,700 tons. They are each supported by heavy steel trusses of the double cantilever style upon a ram 90 inches in diameter and weighing 120 tons. These rams have a 65 foot stroke and work in two steel water tight presses, one under each chamber. The foundations for the presses are on solid rock in wells 70 feet deep.

The pressure caused by this 1,700 ton weight on the 90 inch ram is about 600 pounds to the square inch, and the two presses are connected by a pipe 12 inches in diameter. This connection enables the two chambers to work practically automatically. That is when the valve connecting these two presses opened the chamber that is at the top descends and the one at the bottom ascends until they are at a level unless there is greater weight in one than the other. In actual operation the chamber which it is desired to lower, will be loaded down until it contains about 8 inches of extra water which will give it an increased weight of 100 tons, sufficient to more than break the balance and send the chamber to the bottom. This operation may be carried on without regard to whether there are boats in the chambers or otherwise since it is a well-known scientific fact that any body floating in the water always displaces its own weight and a chamber containing three or four or half a dozen boats may be raised by the weight of the water in the other chamber with the extra 8 inches of water.

While it has been said that theoretically the lock is automatic, practically it is hardly so, in view of the fact that there is bound to be a certain amount of leakage in the presses, in which the rams work, similar to the piston in an engine, with this difference that in the case of the ram, it touches the press at only one point, at the top. where the gland is, while in the case of engine piston it touches the cylinider for its entire length and may have pressure on both sides of it.

As an auxiliary to the automatic operation and to provide for the inevitable leakage, an accumulator has been erected in the east side tower. This accumulator has a ram 20 inches in diameter, with a stroke of 30 feet 6 inches, and has been loaded down to create a pressure of 640 pounds to the square inch, or 40 pounds more than that under which the main presses work. A pair of triple cylinder pumps installed in the breast wall is used to pump water into the accumulator. These pumps are operated by a water turbine, 16 inches in diameter, of 100 horse power, working under a 65 foot head.

Balsam-Simcoe Lake Division.

For section No. 1 Mr. Andrew Onderdonk was the contractor. He completed his contract some time ago, but as it is only a section of this division, it is only occasionally used, and has not been formally opened for public traffic. It is about six miles in length.

Section No. 2 is under contract with Messrs. Larkin & Sangster, except for the steel superstructure of the hydraulic lift lock. Their work is completed, with the

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This accumulator is also used to operate the hydraulic engines with which the gates are opened or closed, and also for the capstan used in towing vessels in and out of the chambers. This accumulator is simply an auxiliary to the main presses, which in reality are the heart of the operation.

The rams upon which the chambers are supported are worthy of special mention. It should not be forgotten that the 90 inch ram is the only place where the chamber rests, and it is fixed directly in the centre of the chambers. The ram is made of cast iron in sections and has a perfectly smooth surface, and the metal is 3½ inches thick. The presses in which the rams work are steel castings, 3½ inches thick and 92½ inches internal diameter.

The gate valve on the 12 inch pipe connecting the two presses, and upon which depends the upward and downward motion of the chambers, is operated by the lock master from his cabin in the centre tower, who is in complete control of the operations of the lock. This cabin has been fitted up in first-class shape, the interior fittings being of British Columbia cedar, varnished and finished in natural wood. It is here that the working of the lock is controlled, there being three main levers to do the work. Three men in all are required to perform a lockage; the lock master, who raises and lowers the chambers, and one man at each gate to operate the engine opening and closing the gates, and also to manipulate the capstans used to tow the boats and control them while in the chambers. No steamers will be allowed to enter the chambers under their own steam.

There is a space of about 1½ inches between the ends of the movable lock chambers and the upper and lower reaches of the canal. To close this space and prevent leaking, there is a collapsable tube, which, when inflated with air supplied by a Taylor hydraulic air compresser, effectively prevents any leakage.

The method of operating the lock to allow a vessel to go from the lower to the upper reaches of the canal may be described briefly as follows:—

One chamber is up the other down; the bottom of the upper chamber is then about 10 inches lower than the bottom of the canal above, and has about 8 feet 10 inches of water on the sill. The seal tube is then inflated in the lower gate, thus making good the opening between the chamber and the canal. The lower gates are then opened outwards, thus lengthening the lower reach of the canal by the length of the chamber, 140 feet. The gates of the chamber and those of the reaches fit in together, and the same operation opens or closes both. The vessel is then towed in by the capstan, the gates raised and the tubes deflated, and the chamber is then ready for its vertical motion. The lockmaster opens the main valve between the two presses gradually, and as he does so, the difference in weight in the upper chamber, by reason of the greater quantity of water in it, causes it to lower, and the opposite chamber to rise. At the end of the stroke the lock master closes the valve, and by a similar series of operations to that which allowed the vessel to enter, it is taken out, and proceeds under its own steam.

The total length of time required to make a lockage is about 12 minutes from the time that the gates are lowered at the bottom to allow the boat to enter to the time when it leaves the chamber above. The actual time taken in the ascent is about three minutes.

The lock presents a very handsome and symmetrical appearance and the embankments are beautifully sodded in terraces. The concrete work is of a massive character, the breast wall being 40 feet thick, 85 feet high, and 126 feet long. A driveway is made through the breast wall and under the driveway is the pump room, in which are located the pumps mentioned above, as well as a turbine for generating electricity for lighting purposes. The wing walls extend towards the embankments 100 feet. The towers, of which there are three, and whose duties are to guide the chambers in their vertical course, are 105 feet high from the bottom of the pit, which is 27 feet below the level of the water in the lower reaches. The side towers at the base are 30 x 40 feet with a vertical shaft 18 x 18 feet 6 inches, surmounted by a cap, and with cornices of ornamental design. The central tower is 12 feet wide throughout. The operator's cabin on the top of the central tower is a 9 x 15 feet inside dimensions, the structure being copper sheathed. The length of the lock from end to end is about 300 feet and it is 220 feet from the well of the presses to the operator's cabin.

exception of the construction of the arch concrete bridge over the canal at the 4th concession of Eldon and the building of the road approaching the bridge across the flooded lands. The work under this contract is well and substantially executed. Tenders are now about to be invited for the steel superstructure of the hydraulic lift lock, the lift of which is 48·44 feet.

Section No. 3 is under contract with Messrs. Brown and Aylmer. The length of the section is 5½ miles, and it extends to Lake Simcoe. This contract work will not be completed until next season. The concrete entrance piers in Lake Simcoe will be finished in about a week's time. The cutting from the entrance piers to Centre road is about three-quarters done. The concrete lock No. 4, of which the foundations are laid, will probably occupy three weeks in the spring to complete. These are the only works of any magnitude remaining to be done to complete the contract. Upon the completion of this section there will be unbroken navigation available from Heeley's Falls to Lake Simcoe, a distance of about 160 miles.

To complete this canal, which is designed to extend from the Georgian bay to the waters of Lake Ontario, there remains to be placed under contract the section from Lake Simcoe to Georgian bay and the work between Heeley's Falls and Lake Ontario waters.

The following is a statement of the expenditure made on the construction of this canal from its commencement up to October 1, 1904:—

Expended prior to June 30, 1867	$ 309,371 31
Expended subsequent to June 30, 1867, and June 30, 1894 (date of works since contracted for)	782,524 88
Expended from June 30, 1894, to June 30, 1901	2,070,431 18
Total expenditure up to June 30, 1901	$3,162,327 37
Expended from June 30, 1901, to June 30, 1903	973,026 19
Total expenditure up to June 30, 1903	$4,135,353 56
Expended during year ended June 30, 1904	489,038 44
Total expenditure up to June 30, 1904	$4,624,392 00
Expended from June 30, 1904, to October 1, 1904	85,489 16
Total expenditure up to October 1, 1904	$4,709,881 16

ENLARGEMENT.

LACHINE CANAL.

This canal extends from Montreal to Lachine, a distance of 8½ miles. The mitre sills of the locks have 14 feet of water upon them. The building of the stone lining of the slopes of the prism has progressed very slowly; there still remains much to be done to complete this work. Tenders will shortly be invited for the balance of the work remaining to be done. The government dredge has been engaged during the year in

dredging for a depth of 20 feet below low water, as far as St. Gabriel basin, so that large vessels can enter the several basins. The work will not be completed during the current year, nor until the underpinning of the wall on the south side of the basin is completed. Owing to unforeseen delays with the work the machinery for operating the lock gates, valves and bridges by electricity has not been in condition to be used. The paving of Mill street with granite blocks is completed. The wooden bridges at Napoleon street and Coté St. Paul have been removed and replaced by steel structures resting on concrete piers. These new structures have a clear opening of 75 feet on each side of the pivot pier, and are 36 feet wide. They will be operated by electricity.

The total expenditure for original construction from 1843 to 1848		$2,587,532 85
Expenditure in 1869		2,000 00
Total expenditure up to June 30, 1869		$2,589,532 85
Total expenditure for enlargement up to June 30, 1903	$8,591,631 27	
Expended in year ended June 30, 1904.	181,487 06	
Total expenditure to June 30, 1904.	$8,773,118 33	
Expended from June 30, 1904, to October 1, 1904	20,339 59	
Total expenditure for enlargement to October 1, 1904		8,793,457 92
Total expenditure for construction and enlargement to October 1, 1904		$11,382,990 77

CORNWALL CANAL.

This canal extends from Cornwall to Dickenson's Landing, a distance of 11 miles. These works are completed, with the exception of the machine shop and office, the electrical appliances, the enlargement of the old weir at lock 17, and the strengthening of the bank opposite the town of Cornwall, all of which works will, it is confidently expected, be finished before the close of the current year.

Total expenditure for construction to June 30, 1875.		$1,945,624 71
Total expenditure for enlargement up to June 30, 1903	$5,017,674 24	
Expended in year ended June 30, 1904.	113,795 16	
Total expenditure to June 30, 1904	$5,131,469 40	
Expended from June 30, 1904, to October 1, 1904	13,673 15	
Total expenditure to October 1, 1904		5,145,142 55
Total expenditure on construction and enlargement to October 1, 1904		$7,090,767 26

FARRAN'S POINT CANAL.

This canal commences at Farran's Point and exetnds a mile westward.

The work of enlargement on this canal is completed.

The total expenditure for construction and enlargement up to June 30, 1903, is	$850,281 58
Expended during year ended June 30, 1904	18,700 00
Total expenditure up to June 30, 1904	$868,981 58
Expended from June 30, 1904, to October 1, 1904	12,973 15
Total expenditure up to October 1, 1904	$881,954 73

RAPIDE PLAT CANAL.

This canal extends from Morrisburg westward 3⅞ miles. The work of enlargement on this canal is completed with the exception of work at the upper entrance under contract with Mr. P. H. Gilbert to the value of about $4,000, which will be completed this season. The work consists of masonry upon the upper entrance pier.

Total expenditure up to June 30, 1903	$2,122,602 84
Expended during year ended June 30, 1904	26,774 27
Total expenditure up to June 30, 1904	$2,149,377 11
Expended from June 30, 1904, to October 1, 1904	1,679 75
Total expenditure up to October 1, 1904	$2,151,056 86

GALOPS CANAL.

The works of enlargement of both the Iroquois section and the Cardinal section of this canal are completed, and the engineers are preparing the final estimates, the details of which, in order to meet the requirements of the Auditor General's office, are very voluminous.

The work on the upper entrance section, for which Messrs. Murray and Cleveland are the contractors, is drawing to a close, and will it is confidently expected be completed during the current year.

The proposed wharf at the upper entrance of the Cardinal cutting has not as yet been placed under contract, as there is no parliamentary appropriation available.

Total expenditure on enlargement up to June 30, 1903	$5,271,050 16
Expended from June 30, 1903, to June 30, 1904	256,536 30
Total expenditure up to June 30, 1904	$5,527,586 46
Expended from June 30, 1904, to October 1, 1904	36,779 81
Total expenditure up to October 1, 1904	$5,564,366 27

WELLAND CANAL.

Improvements.

The Trunk Line extends from Port Dalhousie on Lake Ontario to Port Colborne on Lake Erie, a distance of 26¾ miles. At Port Colborne improvements are in progress. Messrs. Hogan and McDonnell are the contractors for this work. The condition of the works may be stated to be as follows:—About 50 per cent of the work in the entrance channel and canal basin north of the lighthouse on the end of the west pier is done. The docking on the east side of the canal basin south of the Grand Trunk Railway's elevator is advancing satisfactorily. The rock excavation to form a wide channel with a depth of 22 feet of water to deep water in the lake is nearing completion. The cribwork and concrete walls forming the two elevator docks are completed, with the exception of 100 feet in each dock where an opening is temporarily left to admit of scow loads of materials entering. The filling of these docks will require about 180,000 cubic yards of material, of which about 60 per cent has already been deposited. Considering the vigour with which the work is now being prosecuted, appearances indicate that the whole work under contract will be completed next season. In the past, this work has progressed slowly, inasmuch as it was very important that the breakwaters forming a harbour and protection to the entrance of the canal, under contract by these same contractors with the Public Works Department, should be pushed forward vigorously; thence these contractors were allowed to specially direct their attention to the completion of these breakwater works rather than to our inside works.

Total expenditure up to June 30, 1903	$527,960 36
Expended from June 30, 1903, to June 30, 1904	190,501 24
Total expenditure up to June 30, 1904	$718,451 60
Expended from June 30, 1904, to Oct. 1, 1904	28,107 22
Total expenditure up to October 1, 1904	$746,568 82

REMOVAL OF OBSTRUCTIONS AND IMPROVEMENTS.

The obstructions referred to are the pivot piers of the bridges in the centre of the canal. It is proposed, each year, to tear down two or three of the old bridges and build new structures spanning the entire channel, until all the bridges have been so treated. The following named bridges have already been so rebuilt, viz.:—The Humberstone, the Junction, the Welland and the Port Robinson. The Quaker bridge has been torn down and abandoned, as being no longer necessary. The following named bridges are now being torn down and rebuilt with the one span covering the whole prism of canal, viz.:—The Allanburg and the Marlatts bridges. Mr. Joseph Battle is the contractor for the building of the substructure, and the Dominion Bridge Company are the contractors for the superstructure. Other improvements of various kinds have been carried out.

Total expenditure up to June 30, 1903	$125,116 72
Expended from June 30, 1903, to June 30, 1904	177,380 11
Total expenditure up to June 30, 1904	$302,496 83
Expended from June 30, 1904, to October 1, 1904	27,031 62
Total expenditure up to October 1, 1904	$329,528 45

DEEPENING PORTIONS OF LONG LEVEL.

This work is being executed by Messrs. Magann and Phinn, contractors. They have completed the work between Allanburg and Welland, and are now working between Welland and Humberstone. They have shown themselves to be capable, energetic contractors, having carried on the work with skill and energy.

Total expenditure up to June 30, 1903	$ 85,349 71
Expended from June 30, 1903, to June 30, 1904	99,939 05
Total expenditure up to June 30, 1904	$185,288 76
Expended from June 30, 1904, to Oct. 1, 1904	74,139 41
Total expenditure up to October 1, 1904	$259,428 17

DEEPENING CANAL FROM PORT COLBORNE TO HUMBERSTONE.

This is submarine rock work, Messrs. Hogan and McDonnell are the contractors. They have made good progress with the work, and it is believed they will complete their contract during the current year.

Total expenditure up to June 30, 1903	$66,411 01
Expended from June 30, 1903, to June 30, 1904	19,790 00
Total expended up to June 30, 1904	$86,201 01
Expended from June 30, 1904, to October 1, 1904	Nil.
Total expended up to October 1, 1904	$86,201 01

DEEPENING ROCK CUT AT RAMEY'S BEND.

This is submarine rock work. Messrs. Weddell, Battle and Manley are the contractors. Very little work has been done by them up to June 30, 1904. The work is progressing well.

Total expenditure up to June 30, 1904	$ 1,730 00
Expenditure from June 30, 1904, to Oct. 1, 1904	9,970 00
Total expenditure up to October 1, 1904	$11,700 00

	Construction.	Enlargement.
Total expenditure up to June 30, 1903.	$7,693,824 03	$16,940,333 28
Expended from June 30, 1903, to June 30, 1904..		555,751 00
Total expenditure up to June 30, 1904..		$17,496,084 28
Expended from June 30, 1904, to October 1, 1904		132,443 69
Total expenditure up to October 1, 1904..		$17,628,527 97

ST. LAWRENCE RIVER AND LAKE IMPROVEMENTS.

LAKE ST. LOUIS.

The channel cut through this lake is two miles long, 300 feet wide, with 17 feet of water at low water. The hydrographic surveying has been transferred to the Marine and Fisheries Department, who are now completing the surveys of this lake which were commenced by this department.

Total expenditure up to June 30, 1903..	$290,259 21
Expended from June 30, 1903, to June 30, 1904..	7,916 90
Total expenditure up to June 30, 1904..	$298,176 11

LAKE ST. FRANCIS.

The following named shoals have been cut through and channels formed for 14 feet navigation:—St. Regis bar, the Hamilton Island channel, Clark's Island shoal, the Middle ground, the Highland shoal. The work was finished last year.

Total expenditure up to June 30, 1904..	$ 75,906 71

GALOPS RAPIDS.

A channel 3,000 feet long, 300 feet wide in width, with a depth of 17 feet of water is being cut through the upper bar, North Caledonia shoals, Island shoal and lower bar. This work will be completed during the current year. The Gilbert Dredging Company is the contractor for the work. It is expected that after the work is completed this channel will be largely used by vessels.

Total expenditure up to June 30, 1903..	$903,441 85
Expended from June 30, 1903, to June 30, 1904..	6,450 00
Total expenditure up to June 30, 1904..	$909,891 85
Expended from June 30, 1904, to October 1, 1904..	11,402 37
Total expenditure up to October 1, 1904..	$921,294 22

NORTH CHANNEL.

This channel is about 2⅛ miles in length, 300 feet wide, with 16 feet of water at low water. It commences about one mile west of the upper entrance to the Galops canal, and runs in a direct line to deep water off Chimney Point. The work comprises the building of a dam from Adam's island to Galops (Ogden) island. These works have been continued to be prosecuted during the year, the substructure of the dams having been completed and the work of dredging in the north channel having been continued and is still in progress, with every prospect of this contract being completed during the current year.

Total expenditure up to June 30, 1903	$1,294,940 43
Expended from June 30, 1903, to June 30, 1904	68,595 42
Total expenditure up to June 30, 1904	$1,363,535 85
Expended from June 30, 1904, to October 1, 1904	12,980 00
Total expenditure up to October 1, 1904	$1,376,515 85

ST. LAWRENCE RIVER AND CANALS.

Although payments have been made for works under this heading, they were made on final estimates of work done the year previous. Mr. Rheaume, the engineer looking after the works for the time being, recommends the further straightening of the channel at the following named points :—

First.—Immediately east of the lower entrance of the Farran's Point canal ; Baker's Point should be reduced.

Second.—Between Aultsville and Morrisburg, Jack Ass shoal should be removed.

Third.—Rose Point, immediately below the lower entrance of the Rapide Plat canal should be reduced, materially improving the channel.

Fourth.—Robertson's Point, at the head of the Rapide Plat canal on the north side of the river, could with advantage to navigation be reduced.

Fifth.—On the north side of the river at Iroquois, Pine Tree Point should be reduced, materially improving the channel thereby.

He suggests that, with a view of these improvements, a careful examination and survey should be made. As the hydrographic survey service has been transferred from this department to the Marine and Fisheries Department, this work, it appears to me, will devolve upon them.

Total expenditure up to June 30, 1903	$448,452 03
Expended from June 30, 1903, to June 30, 1904	9,634 66
Total expenditure up to June 30, 1904	$458,086 69
Expended from June 30, 1904, to October 1, 1904	435 65
Total expenditure up to October 1, 1904	$458,522 34

SUMMARY.

To summarize, I may state the cost of construction and enlargement of the canals and improvements to the river and lakes up to June 30, 1904, to be as follows, viz.:—

Route from Montreal to Port Arthur.

—	Original Construction of Canals.	Enlargement of Canals.	Improvement to St. Lawrence River and Lakes.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.
Lachine Canal	2,589,532 85	8,773,118 33		11,362,651 18
Lake St. Louis			298,176 11	298,176 11
Soulanges Canal	6,851,971 77			6,851,971 77
Lake St. Francis			75,906 71	75,906 71
Cornwall Canal	1,945,624 73	5,131,469 40		7,077,094 13
Williamsburg Canals	1,320,655 54	2,486 63		
Farran's Point Canal		868,981 58		
Rapide Plat Canal		2,149,377 11		9,869,087 32
Galops Canal		5,527,586 46		
Galops Rapids			909,891 85	909,891 85
River Reaches			685,495 42	685,495 42
North Channel			1,363,535 85	1,363,535 85
Murray Canal	1,248,720 26			1,248,720 26
Welland Canal	7,693,824 03	17,496,084 28		25,189,908 31
Sault Ste. Marie Canal	4,313,494 30			4,313,494 30
Total	25,963,823 48	39,949,103 79	3,333,005 94	69,245,933 21

If to the above total there is added the cost of the Beauharnois canal—$1,636,690.26, now not required for navigation—the total expenditure is $70,882,623.47.

Route from Lachine to Ottawa.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Anne's Lock	134,456 51	1,035,759 12	1,170,215 63
Carillon and Grenville Canals	63,053 64	4,119,039 32	4,182,092 96
Total	197,510 15	5,154,798 44	5,352,308 59

Construction by the Imperial Government is not included. Records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

Route from Ottawa to Kingston.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
Rideau Canal	4,084,323 37		4,084,323 37
Tay Canal	489,599 23		489,599 23
Total	4,573,922 60		4,573,922 60

Route from St. John's, P.Q., to Sorel.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
Chambly Canal	637,056 76		637,056 76
St. Ours Lock	121,537 65		121,537 65
Total	758,594 41		758,594 41

Route from Lake Ontario to Georgian Bay.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
Trent Canal	4,314,459 19		4,314,459 19
Total	4,314,459 19		4,314,459 19

Route from Atlantic Ocean to Bras D'Or Lakes.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Peter's Canal—Cape Breton	248,762 84	399,784 30	648,547 14
Total	248,762 84	399,784 30	648,547 14

The Culbute canal has been abandoned and the Beauharnois canal is no longer required for navigation purposes, but has to be maintained as a power canal.

The construction of these two canals cost:—

Culbute canal	$ 382,776 46
Beauharnois canal	1,636,690 26
Total	$2,019,466 72

MAINTENANCE AND OPERATION.

LACHINE CANAL.

Operation.

No interruption occurred to the traffic through this canal during the season of 1903.

Maintenance.

The repairs on old locks 1 and 2 are still in progress and are drawing near completion.

The cost of repairs made during the year ended June 30, 1904, is as follows:—

Ordinary repairs under head of staff and repairs		$ 50,660 92
Special repairs under head of income—		
Tail race, Côte St. Paul, and cement	$ 4,452 18	
Renewing wall, Basin No. 2	9,021 48	
Cement for masonry wall, Basin No. 2	1,752 66	
Repairs to old Locks 1 and 2	89,064 66	
Raising Shed No. 1, St. Gabriel Basin	8,505 55	
Repairs to buildings	2,559 19	
Water service for protection against fire	1,799 85	
Completing work of paving Mill Street	25,663 48	
Lock gates	19,886 09	
		162,705 14
Total		$ 213,366 06

SOULANGES CANAL.

Operation.

The operation of this canal was conducted without interruption except for twenty-four hours on August 15, 1903, when one of the upper gates in the guard lock was thrown off its pivot by rush of water caused by a gale of wind. The cost of repairs made during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs		$39,382 01
Special repairs under head of income:		
Land and damages	$ 650 00	
Repairing breach in bank between locks 1 and 2	14,958 69	
		15,608 69
Total		$54,990 70

CORNWALL CANAL.

Operation.

No interruption occurred to the traffic through this canal during the season of 1903.

The canal is well lighted by electricity, and the lock gates, valves, weirs and bridges have continued to be operated most successfully by electrical power.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs	$20,932 55
Special repairs under head of income:	
Strengthening and protecting north bank	1,730 16
Total	$22,662 71

WILLIAMSBURG CANALS.

Operation.

The only interruption to traffic through these canals was in the Farran's Point canal on August 22, 1903, when the steam barge 'Erin' sunk in the lock and blocked traffic three days, and in the Galops canal on November 21, 1903, owing to the water having been lowered to stop a leak which had developed in the bank, which interrupted traffic for two days.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs..	$19,430 05
Special repairs under the head of income:	
Building a working scow..	1,978 85
Total..	$21,408 90

WELLAND CANAL.

Operation.

No interruption to traffic occurred on this canal during the season of 1903. The removal of the pivot piers from the centre of the canal, which is being done by degrees, is a great benefit to navigation, and is much appreciated by the transportation companies which use the canal.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs....		$ 85,717 88
Special repairs under the head of income:		
Stone protection to banks of old canal ..$	4,670 68	
Changing valves and hanging gear of new canal lock gates....	14,998 62	
Remodelling gate yard and repair shops at Port Dalhousie....	5,000 00	
Rebuilding dam and bridge at Dunnville to complete.....	370 81	
Improving drainage along feeder.....	1,155 00	
Repairing foundations of Port Maitland lock....	4,945 47	
		31,140 58
Total....		.$116,858 46

SAULT STE MARIE CANAL.

Operation.

No interruption to navigation has occurred in this canal during the season.

During the season of 1903, 5,502,185 tons of freight and 32,019 passengers passed through the canal and 3,538 vessels.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs...$	9,491 44

CHAMBLY CANAL.

Operation.

The only interruption to navigation on this canal was for 36 hours from the 29th to 31st of May, 1903, caused by requisite repairs to the canal, which were taking place.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows :—

Ordinary repairs under the head of staff and repairs..$		25,656 00
Special repairs under the head of income:		
Repairs electric station and Bye-wash, Ste. Thérése.....$	5,999 54	
To complete waste weir at electric power house.....	468 00	
Extend and repair wall at head Ste. Thérése Island.....	748 29	
Macadamizing 2¼ miles of road.....	3,000 00	
Macadamizing tow path.....	1,507 30	
Rebuilding culvert at Little River, Iroquois.	7,867 85	
Water supply at shops.....	399 65	
Damages by flooding.....	1,711 00	
Renewing bridges 7 and 8.....	4,999 96	
		26,701 59
		$52,357 59

ST. OURS LOCK AND DAM.

Operation.

There was no interruption to navigation on this canal during the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1904, was as follows:—

Ordinary repairs under the head of staff and repairs		$ 1,690 61
Special repairs under the head of income:		
Stop logs	$ 868 89	
Repairing landing wharfs	7,115 52	
		7,984 41
Total		$ 9,675 02

STE. ANNE'S LOCK.

Operation.

There was no interruption to navigation on this lock during the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1903, is as follows:—

Ordinary repairs under the head of Staff and Repairs	$ 2,244 13

CARILLON AND GRENVILLE CANALS.

Operation.

There was no interruption to navigation on these canals during the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs	$17,262 29
Special repairs under head of income:	
Repairing guide piers	9,150 07
Total	$26,412 36

BEAUHARNOIS CANAL.

Operation.

This canal is not maintained for general navigation but as a power canal; however some two or three market boats were allowed to navigate it for local business.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of Staff and Repairs	$11,936 37

MURRAY CANAL.

Operation.

There was no interruption to navigation on this canal during the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs	$6,075 94
Special repairs under the head of income:	
Building wire fence and making land plan	2,521 13
Total	$8,597 07

RIDEAU CANAL.

Operation.

There was no interruption to navigation on this canal during the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows:—

Ordinary repairs under the head of staff and repairs		$38,496 78
Special repairs under the head of income:		
Rebuilding swing bridge at Hog's Back	$2,499 05	
Rebuilding lockmaster's house at Kingston Mills	1,595 27	
Building swing bridge at Concession street Ottawa	9,430 72	
		13,525 04
Total		$52,021 82

TRENT CANAL.

Operation.

There was no interruption to navigation on this canal during the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows :—

Ordinary repairs under the head of staff and repairs....		$21,179 12
Special repairs under the head of income :—		
Building new entrance pier at Peterborough	$1,996 89	
Building new entrance pier at Burleigh...	1,484 79	
Building new entrance pier at Lovesick....	1,489 80	
Dredging shoals between Peterborough and Heeley's Falls.....	2,628 60	
Dredging shoals at Ketchawannoe and Buckhorn lakes.....	3,366 99	
Rebuilding dam at Peterborough.....	8,902 87	
Contribution towards building bridge at Gannon's Narrows.....	1,000 00	
Contribution towards building road—Lindsay and Fenelon Falls.....	388 61	
		21,228 55
Total.....		$42,407 67

ST. PETER'S CANAL.

Operation.

There was no interruption to navigation on this canal for the season of 1903.

Maintenance.

The cost of repairs during the year ended June 30, 1904, is as follows :—

Ordinary repairs under the head of staff and repairs.....	$122 45

CULBUTE CANAL.

This canal has been abandoned, but some claims in connection with flooding of lands are yet undisposed of.

Damage caused by flooding land.....	$2,204 50

Summary.

Cost of maintenance and operation of the canal system for the year ended June 30, 1904.....	$1,099,771 68
Net revenue of canals after deducting refunds.....	72,253 11
Excess of cost of maintenance and operation over revenue.....	$1,027,518 57

SESSIONAL PAPER No. 20

TABLE showing the dates of opening and closing of the canals for the season of 1903.

Name of Canal.	Navigation opened 1903.	Navigation closed 1903.
Lachine	May 1	December 3
Soulanges	" 1	" 2
Cornwall	" 1	" 4
Farran's Point	" 1	" 4
Rapide Plat	" 1	" 4
Galops	" 1	" 4
Murray	April 1	November 30
Welland	" 13	December 12
Sault Ste. Marie	" 2	" 12
Grenville	" 27	November 30
Carillon	" 27	" 30
Ste. Anne's	" 28	" 30
Chambly	May 20	" 30
St. Ours	April 8	" 26
Rideau { At Ottawa	" 28	" 24
Rideau { At Kingston	May 1	" 16
Trent	April 2	" 18
Beauharnois	May 1	" 30
St. Peter's	April 15	December 31

CANAL STATISTICS.

These statistics are for the season of 1903: they have, as usual, been prepared by Mr. R. Devlin, the officer in charge of the canal statistics office.

TABLE showing the tons of freight passing through each canal, the number of trips of vessels passing through each canal for the season ended December, 1903.

Name of Canal.	Tons of Freight passed through.	No Tolls charged.	No. of Trip of Vessels passing through.
Welland	1,002,919		1,787
St. Lawrence	1,681,206		9,698
Chambly	346,571		3,445
Ottawa	436,473		2,094
Rideau	61,160		3,966
St. Peter's	90,864		1,760
Trent	42,407		2,599
Murray	30,389		762
Sault Ste. Marie	5,511,868		4,351

GENERAL REMARKS.

For details as regards the subjects treated in this report, I refer you to the reports of the officers in charge of the government railways and canals, which form appendices hereto.

RAILWAY SUBSIDIES.

The subsidies voted for railways, as I have stated in my previous annual reports, are in such a form that it is not possible to show the amount of cash subsidy granted, as the amount of subsidy will, in many cases, be based upon the cost of each road. For this reason, I am again this year unable to give the amount of each subsidy available; but, as heretofore, I shall show the amount paid, also the number of miles of railway for which subsidy is granted per mile, was available on July 1, 1903, and the number of miles of railway built up to July 1, 1904, for which cash subsidy per mile was granted. There will also be found the amount of subsidy per annum paid up to July 1, 1904, with the number of miles built.

Amount of cash subsidy per mile paid up to July 1, 1904	$26,615,375 96
Number of miles of railway on which cash subsidy per mile was paid up to July 1, 1904	4,708 41
Amount of cash subsidy per mile paid up October 1, 1904	$26,739,215 96
Cash subsidy per annum paid up to July 1, 1904	2,799,000 00
Number of miles built on cash subsidy per annum to July 1, 1904	252

The foregoing statements do not include the grants in cash and land to the Canadian Pacific Railway, the Canada Central Railway and the Esquimalt and Nanaimo Railway.

These roads, as previously reported, received in cash as follows:—

Esquimalt and Nanaimo Railway (mileage, 71)	750,000
Canadian Pacific Railway (mileage, 1905)	$25,000,000
Canada Central Railway (mileage, 120)	1,525,250
Total	$27,275,250

RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The report of the secretary of the Railway Committee of the Privy Council enumerates the cases which were before the committee from October 1, 1903, to the date when the duties of the committee were transferred to the Railway Commissioners under the Railway Act of 1903, being February 1, 1904, a period of four months, within which period there were five meetings of the Railway Committee as follows:—

October 31, 1903.

November 10, 1903.

December 1, 1903.

January 9, 1904.

January 25, 1904.

The character of the business before them was:

1st. For permission to make highway crossings over railways.

2nd. For permission of one railway to cross another railway.

3rd. For permission of one railway to form a junction with another railway.

4th. For permission for railways to cross and run along streets and highways.

5th. For approval of plan and proposed site of bridges over navigable waters.

6th. For permission to use crossings before installation of interlocking appliances.

7th. For permission to construct branch lines.

8th. For protection of streets and highways crossed by railways.

9th. For running powers of one railway over another railway.

10th. For permission to change location of sections of railways.

11th. For permission to close streets and highways and to divert them.

12th. To determine the terms on which one railway shall use the passenger stations and tracks of another railway.

13th. To direct a railway to widen a street bridge over railways.

14th. To direct the removal of obstructions to free flow of water in a river.

15th. For orders for a railway to provide necessary sidings.

16th. To direct that Bay of Quinté Railway be not allowed to run through a mining property.

17th. To direct that a railway be compelled to allow water pipes to be laid under their tracks.

CANAL STATISTICS.

These statistics are for the season of 1903. They have been prepared by Mr. R. Devlin, the officer in charge of the canal statistics.

COMPARATIVE Statement of Tolls collected in season of 1902 and what would have been collected in season of 1903 had not the canals been made free.

Name of Canal.	Season of 1902.	Season of 1903.
	$ cts.	$ cts.
Welland Canal	98,601 50	136,842 89
St. Lawrence Canals	65,081 11	123,189 47
Chambly Canal	22,713 31	24,759 24
Ottawa Canal	24,852 37	29,439 21
Rideau Canal	3,831 15	4,999 77
St. Peter's Canal	3,034 14	3,293 34
Trent Canal	1,328 98	1,508 07
Murray Canal	1,060 80	1,134 98
Sault Ste. Marie Canal	No tolls.	No tolls.
Total	220,503 36	325,166 97

COMPARATIVE Statement of Tons of Freight which passed through the canals in seasons of 1902 and also of 1903.

Name of Canal.	Season of 1902.	Season of 1903.	Number of trips of vessels passing through.	
			Season of 1902.	Season of 1903.
Welland Canal	665,387	1,002,919	1,568	1,787
St. Lawrence Canals	1,093,133	1,681,206	8,400	9,698
Chambly Canal	379,442	346,571	3,791	3,445
Ottawa Canal	444,682	436,473	1,906	2,094
Rideau Canal	50,879	61,120	2,871	3,966
St. Peter's Canal	73,538	90,864	1 671	1,760
Trent Canal	41,690	42,407	2,550	2,599
Murray Canal	35,178	30,389	830	762
Sault Ste. Marie Canal	4,729,268	5,511,868	5,044	4,351
Total tons	7,513,197	9,203,817	28,631	30,462

GENERAL REMARKS.

For details as regards the subjects treated in this report, I refer you to the reports of the officers in charge of the government railways and canals, which form appendices hereto.

SESSIONAL PAPER No. 20

SUMMARY of Tables of Steam Railways for the years ended June 30, 1903, and June 30, 1904.

	June 30, 1903. Steam Railways only.	June 30, 1904. Steam Railways only.
Miles of railway completed (track laid)	19,077	19,611
" sidings	2,953	3,327
" iron rails in main line	101	66
" steel rails	18,976	19,545
" " (double track)	695	763
Capital paid (including the 4 following items)	1,146,550,769	1,186,546,918
Government (Dominion and Provincial) bonuses paid	189,874,202	195,805,982
" " " loans paid	20,613,214	20,613,214
" (Provincial only) subscriptions to shares paid	300,000	300,000
Municipal aid paid	16,551,044	17,157,810
Miles in operation	18,988	19,431
Gross earnings	96,064,527	100,219,436
Working expenses	67,481,524	74,563,162
Net earnings	28,583,003	25,656,274
Passengers carried	22,148,742	23,640,765
Freight carried (tons)	47,373,417	48,097,519
Train mileage	60,382,920	61,312,002
Passengers killed	53	25
Number of elevators	261	286
" highway crossings at rail-level, with watchman	221	239
" " " without watchman	12,829	13,493
" overhead bridges, highway crossings over railway	468	463
" highway crossings under railway	.....	333
" level crossings of other railways	256	272
" junction with other railways	374	381
" branch lines	223	224
" engines owned	2,488	2,640
" " hired	99	128
" sleeping cars owned		156
" " hired		15
" parlor cars owned	*290	44
" " hired	14	6
" dining cars owned		37
" " hired		5
" official cars owned		60
" first class cars owned	1,106	1,153
" " hired	42	78
" second class and immigrant cars owned	579	583
" " " hired	11	12
" baggage, mail and express cars owned	796	839
" " " hired	22	21
" refrigerator cars owned	979	1,297
" " hired	242	268
" cattle and box freight cars owned	49,652	51,951
" " " hired	3,455	2,926
" platform cars owned	17,784	18,254
" " hired	501	390
" coal cars owned	7,356	8,172
" " hired	283	304
" conductors' vans owned	1,107	1,229
" " hired	19†	19
" tool cars owned	*1,070	823
" " hired	4	5
" snow ploughs owned	308	300
" " hired	5	4
" flangers owned	345	354
" " hired	2	2
" other rolling stock		‡1,421
Included in the above there are the following :—		
Number of cars with air brakes owned	63,788	71,795
" " " hired	4,348	3,478
" " with automatic couplers owned	71,964	76,816
" " " " hired	4,572	3,769

* Including water tank cars, steam shovels, pile drivers, store cars, gravel cars, boarding cars, &c.
† Sleeping, dining, parlor and official cars in this total.
‡ Includes tank cars, steam shovels, derricks, pile drivers, &c.

SUMMARY of Tables of Electric Railways for the years ended June 30, 1903, and June 30, 1904.

	Comparative Statement.	
	June 30, 1903.	June 30, 1904.
Miles of railway completed (track laid)	759	767
" sidings	32	33
" iron rails in main line	7	22
" steel " "	752	745
" " " double track	185	188
Capital paid (including the 3 following items)	$47,274,853	50,399,188
Government (Dominion and Provincial) bonuses paid	$156,800	60,800
Municipal aid paid	$173,000	173,000
Miles in operation	759	767
Gross earnings	$7,233,677	8,453,609
Working expenses	$4,472,858	5,326,517
Net earnings	$2,760,819	3,127,092
Passengers carried	155,662,812	181,689,998
Freight carried (tons)	371,286	400,161
Car mileage	38,028,529	42,066,124
Passengers killed	10	10
Number of highway crossings at rail-level with watchman	7	10
" " " without watchman	307	286
" overhead bridges highway crossings over railway	16	17
" highway crossings under railway	11	9
" level crossings of other railways	89	102
" junctions with "	42	42
" " branch lines	13	7
" power houses (steam power) owned	28	30
" " " hired	2	
" " (water power) owned	11	9
" " " hired	4	3
" passenger cars (motor) owned	*2,027	2,137
" " " hired	6	
" " (trailers) owned	290	223
" official cars owned		1
" locomotives owned	1	2
" baggage, mail and express cars owned	11	13
" cattle and box freight cars owned	†15	‡15
" platform cars owned	70	**77
" tool cars owned	16	13
" snow ploughs owned	26	79
" snow sweepers owned	71	33

* Three are official cars. † Includes one conductors' van. ‡ Includes two coal cars. ** Includes snow sweepers.

The following shows the several routes of railway giving through communication between the Atlantic and Pacific coasts:—

The routes available between Halifax and Montreal are four in number, in all of which the Intercolonial is used, either in whole or in part, as follows:—

Halifax to Montreal.

	Miles.
1. Intercolonial Railway, via Lévis, to Montreal	837
2. Intercolonial Railway to St. John	275
Canadian Pacific Railway, from St. John to Montreal	480
Total	755

	Miles.
3. Intercolonial Railway to St. John	275
Canadian Pacific Railway, from St. John to Vanceboro'	90
Maine Central Railway, from Vanceboro' to Danville Junction	224
Grand Trunk Railway, from Danville Junction to Montreal	270
Total	859
4. Intercolonial Railway to St. John	275
Canadian Pacific Railway from St. John to Edmundston	170
Temiscouata Railway, from Edmundston to Rivière du Loup	81
Intercolonial Railway, from Rivière du Loup to Montreal	278
Total	804

St. John to Montreal.

1. Intercolonial Railway, via Lévis, to Montreal	740
2. Canadian Pacific Railway to Montreal	480
3. Canadian Pacific Railway to Edmundston	170
Temiscouata Railway, from Edmundston to Rivière du Loup	81
Intercolonial Railway, from Rivière du Loup to Montreal	278
Total	529

MONTREAL, OR QUEBEC, TO THE PACIFIC COAST.

Montreal to Vancouver.

	Miles.
1. Canadian Pacific Railway to Vancouver	2,906
Canadian Pacific Railway from North Bay to Vancouver	2,546
2. Grand Trunk Railway to North Bay	560
Total	3,102

Quebec to Vancouver.

1. Canadian Pacific Railway to Vancouver	3,052

	Miles.
2. Intercolonial Railway to Montreal	162
Canadian Pacific Railway from Montreal to Vancouver	2,906
Total	3,068
3. Grand Trunk Railway to Montreal	172
Canadian Pacific Railway from Montreal to Vancouver	2,906
Total	3,078
4. Grand Trunk Railway to North Bay	732
Canadian Pacific Railway from North Bay to Vancouver	2,542
Total	3,274

The Canadian Pacific Railway was opened for through traffic on June 28, 1886.

INTERCOLONIAL RAILWAY.

The Intercolonial Railway touches six Atlantic Ocean ports, namely, Point du Chene, Pictou, Halifax, St. John, Sydney and North Sydney, as well as the ports of Quebec and Montreal on the River St. Lawrence.

The total length of the road operated during the year ended June 30, 1904, was 1,322 miles, and for freight branches 12·50 miles, making a total of 1,334½ miles.

The following are the through distances:—

	Miles.
Halifax to Montreal, via Lévis	837
St. John to Montreal, via Lévis	740
Sydney to Montreal, via Lévis	990
North Sydney to Montreal, via Lévis	983

Freight is carried direct via St. Henri to Montreal, which would reduce each of the above distances by 3 miles.

WINDSOR BRANCH.

This road extends from Windsor Junction, on the Intercolonial Railway, to Windsor, a distance of 32 miles.

PRINCE EDWARD ISLAND RAILWAY.

LENGTH OF LINE.

	Miles.
Souris to Tignish	166
Mount Stewart to Georgetown	24
Charlottetown to Royalty Junction	5
Emerald Junction to Cape Traverse	13
Alberton to Caseumpee wharf	1
	209

Communication between the Prince Edward Island Railway and the Intercolonial Railway is afforded in summer by steamer between Summerside and Point du Chene, between Charlottetown and Pictou and between Georgetown and Pictou, and in winter by specially built steamers between Georgetown and Pictou and between Charlottetown and Pictou. There is also further provision made for communication by ice boats between Cape Traverse on Prince Edward Island and Cape Tormentine on the mainland, a distance of about 9 miles, at which latter place connection is made with the New Brunswick and Prince Edward Railway about 40 miles in length, connecting with the Intercolonial Railway at Sackville. This winter service across the Straits of Northumberland is efficiently worked by the Marine and Fisheries Department.

CANALS.

The following statements give in concise form the essential features of the government canal works and the intermediate water navigation:—

The canal systems of the Dominion, under government control in connection with lakes and navigable rivers, are as follows :—

First.—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)

	Miles.
1. Lachine Canal	8½
Lake St. Louis and River St. Lawrence	16
2. Soulanges Canal	14
Lake St. Francis and River St. Lawrence	33
3. Cornwall Canal	11
River St. Lawrence	5
4. Farran's Point Canal	1
River St. Lawrence	10
5. Rapide Plat Canal	3½
River St. Lawrence	4
6. Galops Canal	7¼
River St. Lawrence and Lake Ontario	236
7. Welland Canal	26¾
Lake Erie, Detroit River, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie Canal	1¼
Lake Superior to Port Arthur	266
Total	1,223¼
To Duluth	1,357
Chicago	1,286

Second.—Ottawa to Lake Champlain.

1. Grenville. 2. Carillon. 3. St. Anne's. 4. Chambly. 5. St. Ours Canals.

Third.—Ottawa to Kingston and Perth.

1. Rideau Canal.

Fourth.—Lake Ontario at Trenton to Lake Huron at mouth of River Severn.

1. Trent Canal (not completed).

Fifth.—Ocean to the Bras d'Or Lakes.

1. St. Peter's Canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,200 statute miles. The distance to Duluth is 2,343 miles. The distance to Chicago 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

Navigation, which is closed by ice during the winter months, opens about the end of April.

Montreal has by this work beeen placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the great lakes and the Sault Ste. Marie canal, to the head of Lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and Lake Superior, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland,

and Sault Ste. Marie. Their aggregate length is 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canal, situated on the United States side of the River St. Mary. Both these canals are free of toll.

It is important to note that the enlargement of the canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: Length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of the vessels to be accommodated is limited to 255 feet. At Farran's, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

LACHINE CANAL.

Length of canal	8½ statute miles.
Number of locks	5
Dimension of locks	270 feet by 45 feet.
Total rise or lockage	45 feet.
Depth of water on sills, at two locks	18 "
" " three locks	14 "
Average width of new canal	150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bars the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle Isle.

SOULANGES CANAL.

Length of canal	14 statute miles.
Number of locks { lift	4
Number of locks { guard	1
Dimensions of locks	280 feet by 45 feet.
Total rise or lockage	84 feet.
Depth of water on sills	15 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "
Number of arc lights	219 of 2,000 c.p. each

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascade Rapids, Cedar Rapids and Coteau Rapids.

From the head of the Lachine to the foot of the Soulanges the distance is sixteen miles.

CORNWALL CANAL.

Length of canal	11 statute miles.
Number of locks	6
Total rise of lockage	270 feet by 45 feet.
Total rise or lockage	48 feet.
Depth of water on sills	14 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "

The old lift locks, 200 feet by 45 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall Canal there is a stretch through Lake St. Francis, 32¾ miles, which is being made navigable for vessels drawing fourteen feet.

The Cornwall Canal extends past the Long Sault Rapids from the town of Cornwall to Dickinson's Landing.

WILLIAMSBURG CANALS.

The Farran's Point, Rapide Plat and Galops canals are collectively known as the Williamsburg canals.

FARRAN'S POINT CANAL.

Length of canal	1 mile.
Number of locks	1
New lock	800 feet by 45 feet.
Old lock	200 "
Total rise or lockages	3½ feet.
Depth of water on sills of new lock	14 "
Depth of water on sills of old lock	9 "
Breadth of canal at bottom	90 "
Breadth of canal at water surface	154 "

From the head of the Cornwall canal to the foot of Farran's Point canal, the distance on the River St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farran's Point rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

RAPIDE PLAT CANAL.

Length of canal	3⅔ miles.
Number of locks	2
Dimensions of locks	270 feet by 45 feet.
Total rise or lockage	11½ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	152 "

The old lift lock, 200 feet by 45, is also available, with nine feet of water on mitre sills.

From the head of Farran's Point canal to the foot of Rapide Plat canal, there is a navigable stretch of 10½ miles. The canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

GALOPS CANAL.

Length of canal		7⅓ miles.
Number of locks		3
Dimension of locks.	one of which is a guard lock.	2-270 by 45. 1-800 by 45.
Total rise or lockage		15½ feet.
Depth of water on sills		14 "
Breadth of canal at bottom		80 "
Breadth of canal at surface of water		144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable 4½ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western pier heads	5⅛ miles.
Breadth at bottom	80 feet.
Breadth at water surface	120 "
Depth below lowest known lake level	11 "

No locks.

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinté and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old Line.	Enlarged or New Line.
Length of canal	27½ miles	26¾ miles.
Pairs of guard-gates (formerly 3)		2
Number of locks—lift	26	25
Number of locks—guard	1	1
Dimensions	1 lock 200 x 45 1 lock 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 45	270 feet x 45 feet.
Total rise or lockage	326¾ feet	326¾ feet.
Depth of water on sills	10¼ "	14 "

WELLAND RIVER BRANCHES.

Length of canal—	
Port Robinson Cut to River Welland	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct	300 feet.
Chippewa Cut to River Niagara	1,020 feet.
Number of locks—one at Aqueduct and one at Port Robinson	2
Dimensions of locks	150 by 26½ feet.
Total lockage from the canal at Welland down to River Welland	10 feet.
Depth of water on sills	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal	21 miles.
Number of locks	2
Dimensions of locks	1 of 150 by 26½ feet. 1 of 200 by 45 "
Total rise or lockage	7 to 8 feet.
Depth of water on sills	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1¾ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet
Total rise or lockage	7½ feet.
Depth of water on sills	11 feet.

The Welland canal has two entrances from Lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburgh, 11¾ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburgh to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit river, Lake St. Clair, the St. Clair river, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL.

Length of canal, between the extreme ends of the entrance piers	5,967 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	20 feet 3 inches.
Total rise or lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

This canal has been constructed through St. Mary's Island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian territory between Lakes Huron and Superior.

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the River Rideau and the Rideau canal to Kingston, on Lake Ontario—a total distance of 245⅝ miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:—

Ottawa River Canals.

The Ste. Anne's Lock.	Grenville Canal.
Carillon Canal.	Rideau Canal.

The total lockage (not including that of the Lachine canal) is 509 feet—(345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Intermediate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine canal	$8\frac{1}{2}$	
From Lachine to Ste. Anne's lock	15	23
Ste. Anne's lock and piers	$\frac{1}{8}$	23
Ste. Anne's lock to Carillon canal	27	50
The Carillon canal	$\frac{3}{4}$	51
From Carillon to Grenville canal	$6\frac{1}{4}$	57
The Grenville canal	$\frac{3}{4}$	63
From the Grenville canal to entrance of Rideau navigation	56	119
Rideau navigation ending at Kingston	$126\frac{1}{4}$	245

STE. ANNE'S LOCK.

	New lock.	Old lock.
Length of canal	$\frac{1}{8}$ mile.	$\frac{1}{8}$ mile.
Number of locks	1	1
Dimensions of locks	200 x 45 feet.	190 x 45 feet.
Total rise or lockage	3 feet.	3 feet.
Depth of sills	9 "	6 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, $23\frac{1}{2}$ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal	$\frac{3}{4}$ mile.
Number of locks	2
Dimensions of locks	200 x 45 feet.
Total rise or lockage	13 feet.
Depth of water on sills	9 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	110 "

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal there is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL

Length of canal	5¾ miles.
Number of locks	5.
Dimensions of locks	200 x 45 feet.
Total rise or lockage	43¾ feet.
Depth of water on sills	9 "
Breadth of canal at bottom	40 to 50 feet.
Breadth of canal at surface of water	50 to 80 feet.

This canal, by which the Long Sault Rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters	126¼ miles.
Number of locks going from Ottawa to Kingston	35 ascending. 14 descending.
Total, lockage	446¼ feet (282¼ rise and 164 fall) at high water.
Dimensions of locks	134 x 33 feet.
Depth of water on sills	5 feet.
Navigation depth through the several reaches	4½ feet.
Breadth of canal reaches at bottom	60 feet in earth. 54 feet in rock.
Breadth of canal at surface of water	80 feet in earth

PERTH BRANCH.

Length of canal	6 miles.
Number of locks	2.
Dimensions of locks	134 feet x 32 feet
Total rise or lockage	26 "
Depth of water on sills	5 " 6 inches.
Length of dam	200 "
Breadth of canal at bottom	40 "
Breadth of canal at surface at water	40 " in rock. 60 " in clay

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on Lake Rideau, and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolfe lake system.

2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.

3. The south-west descending level to Kingston, supplied by the Mud lake system formerly known as the Devil lake system, discharging into Lake Openicon.

Lake Openicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin of Chambly; thence, by the Chambly canal, to St. Johns, and down the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distances between Sorel and New York:—

Section of Navigation.	Intermediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours lock	14	14
St. Ours lock to Chambly canal	32	46
Chambly canal	12	58
Chambly canal to boundary line	23	81
Boundary line to Champlain canal	111	192
Champlain canal to junction with Erie canal	66	258
Erie canal from junction to Albany	7	265
Albany to New York	146	411

ST. OURS LOCK AND DAM.

Length	$\frac{1}{8}$ mile.
Number of locks	1
Dimensions of lock	200 feet by 45 feet.
Total rise or lockage	5 feet.
Depth of water on sills	7 feet at low water.
Length of dam in eastern channel	300 "
Length of dam in western channel	690 "

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 32 miles.

CHAMBLY CANAL.

Length of canal		12 miles.	
Number of locks		9	
Dimensions of locks:—			
Guard lock, No. 1 at St. Johns	122 feet.		
Lift " 2	124 "	From $22\frac{1}{2}$ to 24 feet wide.	
" " 3, 4, 5, 6	118 "		
" " 7, 8, 9 combined	125 "		
Total rise or lockage	74 "		
Depth of water on sills	7 "		
Breadth of canal at bottom	36 "		
Breadth of canal at surface of water	60 "		

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

TRENT CANAL.

The term 'Trent canal' is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in their present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam,

the summit water, about 165 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe ; thence across Lake Simcoe to the Severn river ; thence by the River Severn to Georgian Bay, Lake Huron; the total distance being about 200 miles, of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog to Port Perry, a distance of 190 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches:—

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté to Nine Mile rapids	—	9
Nine Mile rapids to Percy landing	19½	—
Percy landing to Heeley's Falls dam	—	14½
Heeley's Falls dam to Peterborough	51¾	—
Peterborough to Lakefield	—	9½
Lakefield to a point across Balsam lake	61	—
Balsam Lake to Lake Simcoe	—	18¾
Across Lake Simcoe to Severn River	18	—
Lake Simcoe to Georgian Bay via Severn River	—	14
	150¼	65¾
Total distance, Bay of Quinté to Georgian Bay		212
From Sturgeon Point on Sturgeon lake, 48¾ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog		27

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Young Point, Burleigh Rapids, Lovesick, Buckhorn Rapids, Bobcaygeon, Fenelon Falls and Rosedale; also dams at Lakefield, Young's Point, Burleigh Falls, Lovesick, Buckhorn, Bobcaygeon and Fenelon Falls. By these works there is afforded communication between Lakefield, 9½ miles from Peterborough, and Balsam lake, the headwaters of the system; opening up a total of about 160 miles of direct and lateral navigation.

At Lakefield, 9½ miles from Peterborough, the dam at the head of the Nine Mile rapids of the River Otonabee, maintains navigation on Lake Katchewannoe up to Young's Point.

At Young's Point, 5 miles from Lakefield, the dam between Lake Katchewannoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal. The lock here, it should be observed, is controlled by the Provincial government.

At Burleigh Rapids, 10 miles from Young's Point, a canal, about 2¼ miles in length, passes the Burleigh and Lovesick rapids, and gives communication between Stony lake and Deer bay.

At Buckhorn rapids, 7 miles from Burleigh Rapids, there is a canal about one-fourth of a mile long.

At Bobcaygeon, 15¾ miles from Buckhorn Rapids, a dam, 553 feet long, controls the water level up to Fenelon Falls.

At Fenelon Falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length connects Sturgeon lake with Cameron lake.

The following is a list of the locks, with their dimensions:—

1 Lock at Rosedale (maintained by the Ontario government), 100′ x 30′ x 4′ 6″ to 6′ 6″ depth water on mitre sill.

2 Locks at Fenlon.... .... 134′ x 33′ x 5′ 0″ to 7′ 6′ depth of water on mitre sill.
1 " Lindsay.... .. 134′ x 33′ x 5′ 0″ to 7′ 0″ " "
1 " Bobcaygeon.... 134′ x 33′ x 5′ 8″ to 7′ 6″ " "
1 " Buckhorn.... .134′ x 33′ x 5′ 0″ to 9′ 0″ " "
1 " Lovesick.... ...134′ x 33′ x 5′ 0″ to 9′ 4″ " "
2 " Burleigh.... ..134′ x 33′ x 6′ 0″ to 8′ 0″ " "
1 " Young's Point (a provincial government work) 134′ x 33′ x 5′ 0″ to 14′ 0″ depth of water on mitre sill.
1 " Peterborough...134′ x 33′ x 5′ 0″ to 10′ 0″ depth water on mitre sill.
1 " Hastings.....134′ x 33′ x 7′ 0″ to 10′ 6″ " "
1 " Chisholm's.....134′ x 33′ x 5′ 0″ to 8′ 6″ " "
1 Hydraulic lift lock at Ashburnham.

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14

ST. PETER'S CANAL, CAPE BRETON.

Length of canal....	About 2,400 feet.
Breadth at water line....	55 feet.
Lock....	One tidal lock, 4 pairs of gates.
Dimensions....	200 feet by 48 feet.
Depth of water on sills.....	18 " at lowest water.
Depth through canal....	19 "
Extreme rise and fall of tide in St. Peter's bay.....	4 "

This canal connects St. Peter's bay on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

BEAUHARNOIS CANAL.

Length of canal	12 statute miles.
Number of locks	9
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	82½ "
Depth of water on sills	9 "
Breadth of canal at bottom	80 "
Breadth of canal at water surface	120 "

As the new Soulanges canal is now opened for navigation, it is to be presumed that the Beauharnois canal will be abandoned for navigation purposes.

I have the honour to be, sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

Deputy Minister and Chief Engineer of Railways and Canals.

The Honourable H. R. EMMERSON,
Minister of Railways and Canals.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE GENERAL MANAGER,
MONCTON, N.B., September 14, 1904.

SIR,—I have the honour to submit the following report on the working of the Intercolonial Railway during the fiscal year ended June 30, 1904.

I inclose the report of the Chief Engineer on the works charged to capital account, the report of the General Superintendent, and of the Engineer of Maintenance on the repair and renewal of the permanent way, buildings and works, and the report of the Superintendent of Motive Power and of the Mechanical Accountant with the statement relating to the mechanical department; also the following statements of the accounts of the railway prepared by the Chief Accountant and Treasurer:—

1. Capital account.
2. Revenue.
3. Locomotive power.
4. Car expenses.
5. Maintenance of way and works.
6. Station expenses.
7. General charges.
8. Special votes.
9. General stores.
10. General balance.
11. Comparative statement of averages.

The length of railway in operation during the year was 1,320·92 miles, an increase of 6·25 miles over last year, on account of the addition of the Rivière Ouelle branch, 6·25 miles.

Towards improving ferry service at Strait of Canso.

This expenditure was for providing electric light plants on each side of the strait, and installing same, also furnishing a portion of the materials for cribwork protection at Point Tupper.

New machinery for locomotive and car shops.

This is for additional machinery for the construction and repair of locomotives and cars and for the installation of it.

Rolling stock.

Ten consolidation locomotives for freight service and two shunting locomotives were purchased, also four first-class sleeping cars, eight first-class passenger coaches, six second-class sleeping cars, two hundred and seven box freight cars, each of 80,000 pounds capacity, and nine auxiliary cars. One air-brake instruction car was built in the railway shops in Moncton.

To equip passenger cars with vestibules.

Six passenger cars were equipped with vestibules of the wide pattern.

To equip ten passenger cars with Pintsch gas.

Six cars were equipped during the year.

To change air brakes of passenger cars to quick action brakes and apply air signals.

The change of brakes was made on thirty-one cars, and air signals were applied to thirty-eight cars.

To exchange drawbars of freight cars.

Six hundred and fifty-five freight cars and two flangers were changed from the link and pin drawbar to the M.C.B. coupler.

Air brakes to freight cars.

One hundred and twelve freight cars, four freight vans, and one wing plough were equipped during the year with the Westinghouse automatic quick action air brake.

The explanations in regard to the other expenditures on capital account will be found in the report of the Chief Engineer.

REVENUE ACCOUNT.

The gross earnings and the working expenses for the year compare as follows:—

Gross earnings	$6,339,231 43
Working expenses	7,239,982 04
Deficiency	$ 900,750 61

The gross earnings compare as follows with those of the previous year:—

In 1903-04	$6,339,231 43
In 1902-03	6,324,323 72
Increase	$ 14,907 71

The earnings from passenger traffic compare as follows:—

In 1903-04	$2,021,568 04
In 1902-03	1,927,916 97
Increase	$ 93,651 43

The earnings from freight traffic compare as follows:—

In 1903-04	$4,041,122 48
In 1902-03	4,128,255 00
Decrease	$ 87,132 52

The earnings from mails and express freight compare as follows:—

In 1903-04	$ 276,540 55
In 1902-03	268,151 75
Increase	$ 8,388 80

The earnings by mile of railway compare as follows:—

In 1903-04	$ 4,799 10
In 1902-03	4,810 56

The earnings by train mile compare as follows:—

	Cents.
In 1903-04	
In 1902-03	99·66

The number of passengers carried compare as follows:—

In 1903-04	2,663,156
In 1902-03	2,404,230
Increase	258,926

Of this increase 192,830 were local passengers and 66,096 were through passengers.

The weight of freight carried compares as follows:—

	Tons.
In 1903-04	2,664,149
In 1902-03	2,790,737
Decrease	126,588

The decrease in local freight was 116,732 tons and in through freight 9,856 tons.

The following is a comparative statement of a few of the chief articles of freight, showing the quantity carried in this and in the previous year:—

Articles.	1902-3.	1903-4	Increase.	Decrease.
Barrels of flour and meal	1,521,540	1,607,050	85,510	
Bushels of grain	3,392,252	2,788,772	5,510	603,480
Lumber in superficial feet	459,231,589	465,379,803	6,148,214	
Head of live stock	127,060	113,006		14,054
Coal in tons	750,076	694,761		55,315
Manufactured goods in tons	590,526	522,410		68,116
Cords of firewood	55,002	53,606		1,394
All other articles in tons	493,225	1,194,163	700,938	

There was an increase over last year in the quantity of the following articles carried:—Flour, meal and other mill products, potatoes and other vegetables, butter and cheese, apples, horses, logs, ship timber, pulp wood, pit props, railway ties, clapboards, laths and palings, extract of hemlock bark, ore, iron and other metals, fresh fish, oysters and clams, molasses, sugar, salted and fresh beef, hides and skins and leather.

There was a decrease in the quantity of the following:—Grain, hay and straw, eggs, calves, horned cattle, pigs, sheep and lambs, lumber, telegraph poles, tanbark, firewood, shingles, coal, stone, lime and cement, brick, sand, salted fish and dried fish.

WORKING EXPENSES.

The working expenses compare as follows with the previous year:—

In 1903-04	$7,099,982 04
In 1902-03	6,056,653 19
Increase	$1,043,328 85

The averages compare with those of last year, as follows:—

Per mile run by engines—

	Cents.
In 1903-04	86·32
In 1902-03	75·52

Per mile run by trains—

In 1903-04	109·17
In 1902-03	95·45

Working expenses per mile of railway—

In 1903-04	$5,375 03
In 1902-03	4,606 97

The rent paid to the Grand Trunk Railway Company, $140,000, is not included in the above, as it would disturb the comparison with previous years; no corresponding charge relating to the cost of any portion of the railway having been included in the working expenses previous to the year 1898-99.

The permanent way and structures and all the works of the railway received necessary repairs and are in good order.

The number of ties renewed was 644,683. One hundred and fifty-seven sets of switch ties were also renewed.

Thirty-six miles of track were reballasted, 53,645 cubic yards of ballast being used.

Bridges, culverts, wharfs and buildings received necessary repairs.

The fences were repaired and 105 miles of fences were built.

The snow sheds and snow fences were repaired.

The rolling stock received necessary repairs and is in good order.

Five passenger locomotives were purchased and three built in the railway shops at Moncton, to replace an equal number of smaller ones taken out of service.

One second-class sleeping car, three express and baggage cars, two hundred and forty box, eight refrigerator and one hundred and seventy-five platform cars were purchased, fifteen box, thirteen platform, one hopper, two large coal cars and eight vans were built in the railway shops in Moncton, to replace an equal number taken out of service. These freight cars were of much greater capacity than the ones they replaced.

STORES.

The value of stores purchased was	$3,450,953 02
The value of stores used was	3,445,708 27
The value of material sold was	246,111 46

The value of stores on hand at the end of the year was:—

Miscellaneous	$ 326,654 07
Fuel	294,362 66
Track materials	429,668 70
Iron and steel rails	372,671 12
Total	$1,423,356 55

GENERAL.

In the month of November, 1903, the station and other railway buildings at Mitchell were destroyed by fire.

In the month of May, 1904, the old coal shed on the east side of Rivière du Loup bridge was destroyed by fire.

In the month of June, 1904, the coal shed and trestle at St. John were partly destroyed by fire, and about 300 tons of coal were also consumed.

The winter was a very severe one, in fact one of the coldest and most stormy experienced in a great many years. The train service, however, was effectually maintained, and there were no serious blockades of trains. The cost of operating the railway was, however, much increased both directly and indirectly by the severity of the weather.

On April 21, 1904, Mr. G. R. Joughins was appointed superintendent of motive power, and took charge of the locomotive and car departments on that date.

I have the honour to be, sir,

Your obedient servant,

D. POTTINGER,

General Manager, Government Railways.

Collingwood Schreiber, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

No. 1.—INTERCOLONIAL RAILWAY.

DR. CAPITAL ACCOUNT, year ended June 30, 1904. CR.

		$ cts.	$ cts.			$ cts.
1903. June 30.	To cost of Intercolonial Railway to date		70,855,079 20	1903. June 30.	By Dominion of Canada	70,855,079 20
1904. June 30.	To expenditure for current year					
	To increase accommodation at Sydney	25,682 61				
	Original construction	1,979 18				
	To strengthen bridges	164,928 08				
	To increase accommodation at Lévis	62,107 67				
	Air brakes to freight cars	24,990 02				
	New machinery for locomotive car shops	17,006 55				
	To exchange draw bars of freight cars	16,000 00				
	To equip ten passenger cars with Pintsch gas apparatus	4,652 89				
	Rolling stock	643,020 83				
	Increased accommodation at Stellarton	11,565 61				
	New superstructure for Restigouche bridge	95,106 08				
	Towards double tracking parts of line	85,138 57				
	Improvements at Point Tupper	4,888 11				
	Yard for freight business at Rivière du Loup	9,760 72				
	To change air brakes of passenger cars to quick action brakes and apply air signals	2,000 00				
	To extend freight car repair shop at Moncton	26,377 39				
	Engine house, machine shop, car shop, &c., at Rivière du Loup	48,805 68				
	Engine house, &c., at Chaudière Junction	48,475 90				
	Increased accommodation at St. John	67,355 82				
	Increased accommodation at Halifax	105,762 91				
	To increase accommodation at Pictou	1,109 20				
	Improvements at North Sydney	8,349 65				
	Building a spur line of railway from Intercolonial Railway station at Rivière Ouelle to the wharf on the St. Lawrence	32,369 96				
	To increase accommodation at Moncton	95,198 78				
	To equip passenger cars with vestibules	7,129 78				
	Dwelling for agent at Eel River	1,699 60				
	Increased accommodation at Amqui	662 51				
	Increased accommodation at Ste. Flavie	27,472 84				
	Towards improving ferry service at Strait of Canso	16,613 41				
	Increased accommodation at Truro	1,525 19				
	Improvements at Nicolet	496 99				
	Improvements at Little Metis and diverting public road	1,192 96				
	Improvements at Matapedia	1,829 36				
	Increased accommodation and facilities along the line	30,935 57				
	Steel rails and fastenings	50,356 09				
	Additional sidings along the line	55,118 19				

To dredge and blast rock at deep water terminus, Halifax	8,896 20					
Protection to Grand Narrows bridge	9,998 67					
To compensate the Anchor Line for salvage service to ss. *Scotia*	16,072 23					
Dredging at Point Tupper	5,162 61					
New Glasgow—extension to freight shed and crane for loading platform	1,071 50					
To increase water supply	567 99					
Improvements at St. Alexis	3,216 50					
New freight shed at Davelayville	1,328 40					
St. André—extension of siding	1,000 00					
Freight houses at Elgin Road, L'Anse à Gilles and Trois Saumons	1,347 00					
St. Charles Junction—bore hole for water supply	4,621 00					
Siding on wharf at Campbellton	1,256 00					
Sussex—platform extension of military siding	581 36					
Bore hole for water supply at Springhill Junction	1,941 00					
Siding at Pictou Landing	13,690 99					
To purchase power-saw for sawing rails, &c	930 00					
	1,902,340 15					
Less New superstructure for south-west Miramichi bridge (credit value of old bridge)	7,483 25					
		1,894,856 90				
Refunds of previous years		14,000 30				
		1,880,856 60	1904. June 30.	By Dominion of Canada		1,880,856 60
		72,735,935 80				72,735,935 80

T. WILLIAMS,
Chief Accountant and Treasurer.

E. and O. E.,
MONCTON, N.B., June 30, 1904.

No. 2.—INTERCOLONIAL RAILWAY.

REVENUE ACCOUNT, year ended June 30, 1904.

Previous Year.	Expenditure.	Year ended June 30, 1904.	Previous Year.	Earnings.	Year ended June 30, 1904.
$ cts.		$ cts.	$ cts.		$ cts.
2,176,160 76	Locomotive power. Abstract No. 1.	2,616,922 26	1,927,916 97	Passenger traffic.	2,021,568 40
1,338,857 68	Car expenses " 2.	1,707,927 96	4,128,255 00	Freight traffic...	4,041,122 48
1,386,350 29	Main way and works " 3.	1,491,673 18	268,151 75	Mails & sundries.	276,549 55
789,346 84	Station expenses " 4.	878,073 02			
477,373 77	General charges " 5.	517,936 79			
6,168,089 34		7,212,533 21			
111,436 15	Car mileage	112,551 17			
6,056,653 19		7,099,982 04			
140,000 00	Rental of leased lines	140,000 00			
6,196,653 19		7,239,982 04	6,324,323 72		6,339,231 43
127,670 53	Balance			Balance	900,750 61
6,324,323 72		7,239,982 04	6,324,323 72		7,239,982 04

E. and O. E.,
MONCTON, N.B., June 30, 1904.

T. WILLIAMS
Chief Acct. and Treasurer.

No. 3.—INTERCOLONIAL RAILWAY.

LOCOMOTIVE POWER, year ended June 30, 1904.

Previous Year.	—	Year ended June 30, 1904.
$ cts.		$ cts.
17,061 86	Mechanical superintendent's salary, clerk, office and travelling expenses	16,372 66
513,160 91	Wages of drivers, firemen and cleaners	631,711 91
1,111,725 32	Fuel	1,234,927 25
29,881 77	Oil, tallow and waste and small stores	34,048 47
407,861 03	Repairs to engines, tenders and engine tools	592,640 87
44,149 60	Water, including pump and tank repairs	48,058 65
52,320 27	Miscellaneous	59,162 45
2,176,160 76		2,616,922 26

E. and O. E.,
MONCTON, N.B., June 30, 1904.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 4.—INTERCOLONIAL RAILWAY.

Car Expenses, year ended June 30, 1904.

Previous Year.		Year ended June 30, 1904.
$ cts.		$ cts.
152,672 78	Repairs to passenger cars	181,201 65
33,002 79	Repairs to postal, express and baggage cars	54,354 50
412,612 08	Repairs to freight cars and vans	601,030 04
13,250 37	Repairs to snow ploughs and flangers	6,611 71
497,753 65	Wages of conductors, train baggage masters and brakemen	651,137 08
9,211 14	Oil and waste for packing	8,890 72
151,411 46	Small stores and fuel	140,490 05
68,943 41	Miscellaneous	64,212 21
1,338,857 68		1,707,927 96

E. and O. E.,
Moncton, N.B., June 30, 1904.

T. WILLIAMS,
Chief Acct. and Treasurer

No. 5.—INTERCOLONIAL RAILWAY.

Maintenance of Ways and Works, year ended June 30, 1904.

Previous Year.		Year ended June 30, 1904.
$ cts.		$ cts.
6,796 26	Chief and assistant engineer's salaries, clerks, office and travelling expenses	7,235 24
591,742 85	Wages in repairing roadway, fences, semaphores, including new sidings laid in	644,450 60
185,746 44	Rails and fastenings, including new sidings laid in	173,558 47
193,333 92	Ties	194,458 92
179,557 07	Timber, lumber, &c., for repairs to bridges, cattle-guards, snow sheds, fences, &c	201,129 66
17,967 55	Repairs to wharfs	27,175 77
97,894 01	Repairs to buildings and platforms, including extensions and additions to same	90,416 10
19,985 12	Repairs to tools	19,871 66
89,480 70	Cleaning snow and ice	130,652 35
3,846 37	Miscellaneous	2,724 41
1,386,350 29		1,491,673 18

E. and O. E.,
Moncton, N.B., June 30, 1904.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 6.—INTERCOLONIAL RAILWAY.

STATION EXPENSES, year ended June 30, 1904.

Previous Year.		Year ended June 30, 1904.
$ cts.		$ cts.
644,939 90	Salaries and wages of station-masters, agents, clerks, telegraph operators, station baggage-masters, yardmasters, switchmen and labourers	738,964 14
144,406 94	Fuel, oil and light, stationery, tickets and other incidental expenses	139,108 88
789,346 84		878,073 02

E. and O. E.,
MONCTON, N.B., June 30, 1904.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 7.—INTERCOLONIAL RAILWAY.

GENERAL CHARGES, year ended June 30, 1904.

Previous Year.		Year ended June 30, 1904.
$ cts.		$ cts.
197,442 67	General manager, general superintendent, traffic manager, district superintendents, train despatchers, general freight agent, general passenger agents' salaries, clerks, office and travelling expenses	213,633 75
50,091 96	Chief accountant and treasurer, traffic auditor, paymaster, cashiers' salaries, clerks, office and travelling expenses	53,966 56
24,075 20	Damage to men, animals and goods	31,295 37
69,624 15	Ferry service	80,440 66
2,883 80	Telegraph expenses, not including pay to operators	3,701 70
64,978 03	Miscellaneous, printing, advertising, &c	60,976 45
67,761 29	Agency expenses	73,872 30
476,857 10		517,796 79
516 67	To pay Ida E. Robertson and Mary E. Thompson	
477,373 77		517,796 79
	To pay Bridget M. Brown	140 00
477,373 77		517,936 79

E. and O. E.,
MONCTON, N.B., June 30, 1904.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 8.—INTERCOLONIAL RAILWAY.

SPECIAL VOTES, year ended June 30, 1904.

Previous Year.	Rental of Leased Lines.	Year ended June 30, 1904.
$ cts.		$ cts.
140,000 00	Rent of Grand Trunk Railway—Chaudière Curve to Chaudière and Ste. Rosalie to Montreal, including the Victoria Bridge and terminals to Montreal	140,000 00

E. and O. E.,
MONCTON, N.B., June 30, 1904.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 9.—INTERCOLONIAL RAILWAY.

DR. GENERAL STORES ACCOUNT, year ended June 30, 1904. CR.

1903.		$ cts.	$ cts.	1904.		$ cts.	$ cts.
June 30....	To Balance.....	.....	917,941 73	June 30....	By Issues during year.....	3,445,708 27	
					Sales material, fuel, &c.	43,079 00	
					Sales old material.....	203,032 46	
							3,691,819 73
1904.							
June 30....	To Purchases during year.....	3,450,953 02					
	Charges from other departments...	600,716 86					
	Labour, &c.....	127,012 62			By Balance—		
	Staff pay rolls.....	18,552 05			Ordinary stores, including fuel...	1,011,043 67	
			4,197,234 55		Iron and steel rails and fastenings.	412,312 88	
							1,423,356 55
			5,115,176 28				5,115,176 28

T. WILLIAMS,
Chief Accountant and Treasurer.

E. and O. E.,
MONCTON, N.B., June 30, 1904.

No. 10.—INTERCOLONIAL RAILWAY.

General Balance, year ended June 30, 1904.

Dr.		$ cts.	Cr.	$ cts.
To Cash		99 36	By Dominion of Canada	2,129,890 33
Stations		154,522 90	Suspense	3,539 99
Rents		6,152 65	Chatham Ry.	0 07
General stores—			Quebec Construction Co.	194 44
Ordinary stores, including fuel	$ 1,011,043 67		The Elmsdale Co.	135 15
Iron and steel rails and fastenings	412,312 88		Department of Justice	1,000 00
		1,423,356 55	Lake Superior Power Co.	4,187 69
Dept. accounts—			Canadian Pacific Ry.—Traffic	12,121 54
Militia and Defence	$ 20,047 59		Pictou Quarries Co.	300 00
Post Office	38,354 00		Car 'Victoria'	9 00
		58,401 59		
Canadian Pacific Ry.—Rolling stock		22,446 90		
Canada Eastern Ry.—Traffic	$ 5,891 09			
" " General	10,854 47			
		16,745 56		
Canadian Pacific Ry.—General	$ 16,141 43			
" " (N. B. Div.)—General	2,485 17			
		18,626 60		
Grand Trunk Ry.—General	$ 10,045 62			
" " Traffic	13,437 72			
		23,483 34		
Quebec Central Ry.		3,495 41		
Western Counties Ry.—General	$ 15,893 35			
" " Traffic	64 57			
		15,957 92		
Transportation ledger		15,628 92		
Unclaimed freight		57 41		
Dept. of Railways and Canals (stores account)		1 75		
Caraquet Ry.		8,374 71		
Dominion Atlantic Ry.		7,894 37		
Boston and Maine Ry.		41 52		
Atlantic and Lake Superior Ry.		6,271 87		
New Brunswick and Prince Edward Island Ry.		1,934 02		
Tobique Valley Ry.		2,739 25		
Kent Northern Ry.		6,087 36		
Restigouche and Western Ry.		3,032 07		
Temiscouata Ry.		1,281 86		
National Despatch Line		66 45		
Pennsylvania Ry.		28 69		
Receiver Quebec Southern Ry.	$ 434 65			
Quebec Southern Ry. (old account)	27,414 67			
		27,849 32		
Imperial Oil Co.		3 34		

Inverness and Richmond Ry.	16,719 23
Central Vermont Ry.	140 22
Grand Trunk Ry.—Suspense.	98 75
Drummond County Ry.	7,199 87
Wabash Ry.	29 57
Newfoundland Ry.	349 11
Maine Central Ry.	98 81
Midland Ry. of Nova Scotia.	2,463 71
Central Ry. of New Brunswick.	41,811 54
New York, N. H. and H. Ry.	3 32
Lake Shore and M. S. Ry.	1 18
Great Northern Ry. of Canada.	21 66
Ballston Terminal Ry.	396 41
Delaware & Hudson Ry.	2 47
Michigan Central Ry.	2 71
Canada Atlantic Ry.	116 81
Cleveland, C., C. and St. Louis Ry.	1 66
Erie Ry.	5 33
Swift Refrigerator Line.	0 40
Wheeling and Lake Erie Ry.	1 09
Illinois Central Ry.	42 40
Nova Scotia Central Ry.	132 20
New York, Chicago and St. Louis Ry.	0 61
Quebec & Lake St. John Ry.	7 90
New York Central and H. River Railway	25 79
Canada Northern Ry.	0 47
Eastern SS. Co.	7 60
Elgin and Havelock Ry.	2 96
St. Martin's and Upham Ry.	583 04
Detroit Southern Ry.	2 94
Warren Refining Co.	1 37
Salisbury and Harvey Ry.	982 27
Prince Edward Island Ry.	128,325 47
Charlottetown Steam Navigation Co.	14 30
Baltimore and Ohio Ry.	10 27
Street's Western Car Stable Co.	25 62
Armour Refrigerator Line	0 54
Pere Marquette Ry.	4 66
Chicago, Burlington and Quincy Ry.	1 05
Grand Rapids and Indiana Ry.	0 36
Chicago and Northwestern Ry.	4 83
Toledo, St. Louis and Western Ry.	1 10
Rome, Watertown and O. Ry.	5 00
Minn., St. Paul and Sault St. M. Ry.	1 39
Pennsylvania Co.	0 71
Chicago and Great Western Ry.	3 00
Buffalo, Rochester and Pitts. Ry.	6 20
Chicago, Rock Island and Pacific Ry.	2 14

No. 10—INTERCOLONIAL RAILWAY—*Continued.*

General Balance, year ended June 30, 1904—*Continued.*

Dr.	$ cts.	Cr.	$ cts.
Chicago, Mil. and St. Paul Ry	0 81		
Beersville Ry. and Coal Co	3,061 74		
Cincinnati, Hamilton and D. Ry	7 32		
Lake Erie and Western Ry	10 57		
Atcheson, Topeka and S. F. Ry	0 60		
Pittsburg, Cincinnati, C. and St. L. Ry	1 20		
Rutland Ry	2 20		
Cape Breton Ry	1 51		
Moncton and Bactouche Ry	269 04		
Canada Atlantic and Plant Line	3 48		
Maritime Coal Co	35 18		
Montreal Rolling Mills	1,784 14		
Finska Lloyd Navigation Co	1 80		
I. C. R. Employees' R. and I. Assn	1 40		
Great Northwestern Telegraph Co.	55 00		
North American Transportation Co	2,183 63		
Cumberland Ry. and Coal Co	38 04		
Canada Coals and Ry. Co	141 40		
SS. *Minto*	268 14		
SS. *Verda*	50 78		
SS. *Lake Ontario*	17 94		
Acadia Coal Co	62 54		
Intercolonial Coal Co	41 57		
Dominion Coal Co	1,289 60		
Western Union Telegraph Co	1,550 67		
Royal Visit	10,189 80		
Dominion Iron and Steel Co	8,097 75		
Baldwin Locomotive Works	181 10		
Standard Car Truck Co	465 30		
Nova Scotia Steel and Coal Co	9,402 46		
Halifax Station Labour	1,000 00		
Engineering Contract Co	518 68		
New Brunswick Wire Fence Co	25 72		
Micmac Mining Co	317 84		
Montmagny Light and P. Co	1,653 53		
Portland Rolling Mills	1,778 56		
Londonderry Iron and Mining Co	6,338 55		
Hamilton Bridge Co	204 40		
Acadia Sugar Refining Co	0 67		
Maritime Engineering Co	51 70		
Canadian Bridge Co	86 69		

Peerless Tank Line		0 39
Seaboard Air Line		12 74
Cotton Belt Route		0 28
Atlantic Coast Line		0 60
Frisco System		1 37
Quebec Bridge and Ry. Co		126 15
Elgin Branch Ry		726 10
Polson Iron Works		273 25
Union Bearing Co		928 18
Town of Dartmouth		32,000 00
St. John Street Ry		31 00
Springhill and Parrsboro Ry		3,161 99
Coldbrook Rolling Mills		1,967 41
Dominion Bridge Co		88 74
Dead Stock Car Co		15 08
Halifax and Cape Breton Ry		1,151 42
Allan SS. Line		1,892 13
Remittances destroyed		788 81
Schooner *Mary Jane*		71 30
Uncurrent and failed bank notes		82 20
Trois Pistoles Station	$	97 37
Red River	"	32 61
Nauwigewauk	"	3 00
Glengary	"	5 00
Bloomfield	"	25 21
Coal Branch	"	65 84
Welsford	"	55 00
Bic	"	22 00
St. Arsène	"	107 12
Ste. Luce	"	80 00
Dalhousie	"	19 69
Valley	"	6 65
Iona	"	72 71
Isle Verte	"	25 00
Kent Junction	"	28 38
Gloucester Junction Station		78 87
Campbellton Freight	"	25 00
Derby Junction	"	231 04
Ste. Louise	"	0 66
Nicolet	"	36 00
Rivière du Loup, freight	"	136 82
St. Alexandre	"	25 90
Red Pine	"	20 00
Rivière du Loup ticket	"	16 00
Newcastle	"	102 75
Nappan	"	40 00
Nenmancook	"	7 54
St. John, freight	"	3,096 46

No. 10.—INTERCOLONIAL RAILWAY—*Concluded.*

General Balance, year ended June 30, 1904—*Concluded.*

Dr.		$ cts.	Cr.	$ cts.
Amherst, freight station	$ 3 31			
Boisdale "	7 80			
Sackville "	10 17			
Wentworth "	33 24			
Rockingham "	27 47			
New Glasgow "	633 90			
Nash's Creek "	6 25			
Shediac "	34 70			
Eureka Mills "	13 56			
Halifax, freight "	887 49			
Forestdale "	6 34			
Athol "	4 44			
Campbellton, ticket "	94 85			
Moncton, freight "	20 00			
Individual accounts		6,246 14		
		26,379 02		
Total		2,151,378 21	Total	2,151,378 21

E. and O. E.,
Moncton, N.B., June 30, 1904.

T. WILLIAMS,
Chief Accountant and Treasurer.

INTERCOLONIAL RAILWAY.

Individual Accounts, year ended June 30, 1904.

Dr.	$ cts.	$ cts.
J. Barnes Construction Co.		0 50
S. Cunard & Co		24 24
Purcell & Fallon		11,182 53
F. E. Came		2,760 70
J. Norris & Co.		22 22
Ryan and McDonnell		3,736 29
T. A. S. DeWolf & Co		9 51
M. J. O'Brien		4 45
M. Beattie & Sons		1 14
A. R. McDonald		2 76
T. Malcolm		997 25
Furness, Withy & Co.		37 87
Rhodes, Curry & Co		4,894 22
Warren Taylor		8 25
T. B. Calhoun		10 00
J. W. C. McConnell		50 00
A. H. Lindsay		400 00
J. Hardwell		65 50
Geo. McDougall & Co.		1,466 00
L. R. Harrison		1,343 41
Pickford & Black		147 54
I. N. Pouliot		352 20
R. A. & J. Stewart		41 39
Wallace Ross		33 70
J. Richards & Son		116 24
J. Cook & Son		19 80
P. E. Gallant		173 36
J. J. McLeod		644 16
A. Forbes		82 18
H. J. Cameron		1,679 07
H. M. Hamilton		316 66
R. Hamilton		1,131 52
H. Atkinson		12 80
T. Atkinson		49 87
Gray & Lawrence Bros Co.		6 75
St. François Bridge Co		49 59
		31,873 67
Cr.		
Dubs & Co	98 63	
H. M. Price & Co.	17 00	
Cloutier & Gaudreau	22 50	
J. W. Bryson	25 00	
Illsley & Horn	5,331 52	
		5,494 65
		26,379 02

No. 11.—INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT of Averages, year ended June 30, 1904.

—	1903.	1904.
Mileage of railway	1,314·67	1,320·92
Engine mileage	8,019,320	8,224,858
Train mileage	6,345,500	6,503,579
Car mileage	80,690,353	81,030,759
Receipts per engine mile ..... Cents	78·86	77·07
Receipts per mile of railway ..... Dollars	4,810·56	4,799·10
Percentage of passenger earnings to gross earnings	30·48	31·89
" freight " "	65·28	63·75
" other " "	4·24	4·36
Expenses per engine mile—		
Drivers, firemen and cleaners' wages ..... Cents	6·40	7·58
Fuel ..... "	13·86	15·02
Oil, tallow, waste and small stores ..... "	·37	·41
Repairs to engines ..... "	5·09	7·21
Water and tank repairs ..... "	·55	·58
Miscellaneous ..... "	·65	·72
Total	26·92	31·62
Mechanical superintendent's salary, office and travelling expenses	·21	·20
	27·13	31·82
Locomotive power per engine mile ..... Cents	27·13	31·82
Car expenses " ..... "	16·70	20·76
Maintenance way and works per engine mile ..... "	17·29	18·14
Station expenses per engine mile	9·84	10·67
General charges " ..... "	5·95	6·30
	76·91	87·69
Less car mileage	1·39	1·37
Total	75·52	86·32
Rental of leased lines	1·75	1·70
Total per engine mile	77·27	88·02
Locomotive power per train mile ..... Cents	34·29	40·24
Car expenses " ..... "	21·10	26·26
Maintenance way and works per train mile ..... "	21·85	22·94
Station expenses " ..... "	12·44	13·50
General charges " ..... "	7·52	7·96
	97·20	110·90
Less car mileage ..... "	1·75	1 73
Total	95·45	109·17
Rental of leased lines	2·20	2·15
Total per train mile	97·65	111·32
Working expenses per mile of railway :—		
Ordinary	4,606 97	5,375·03
Rental of leased lines	106·49	105·99
	4,713·46	5,481·02

T. WILLIAMS,
Chief Accountant and Treasurer.

E. and O. E.,
MONCTON, N.B., June 30, 1904.

INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,
MONCTON, N.B., September 10, 1904.

SIR,—I have the honour to submit the report of the Maintenance of Way and Works Department for the year ending June 30, 1904:—

TRACK.

During the year 206·05 miles of 56, 58 and 67-pound rails were taken up, and 43·66 miles of 67-pound rails were relaid.

TIES.

During the year 644,683 ordinary ties, and 157 sets of switch ties, were renewed.

BALLASTING.

During the year 35·76 miles of track were ballasted, using 37,227 cubic yards of gravel, and 16,418 cubic yards of ashes and cinders.

SWITCHES AND SEMAPHORES.

Distant electric semaphore signals were erected or extended at the following stations :—

Ste. Flavie	1	Bic	2
St. Fabien	1	Trois Pistoles	1
Montmagny	1	St. Pierre	1
St. Michel	1	St. François	1
Chaudière Junction	1	Rivière Ouelle	1
Lévis	2	Hadlow	2
St. Henri	1	St. Moise	1
Causapscal	2	Amqui	2
Assametquaghan	2	Little Metis	1
Millstream	2	Flat Lands	2
Ste. Rosalie	1	Drummondville	1
Mitchell	1	Forestdale	2
Moose Park	2	Chaudière	1

Two hundred and twelve new switches were put up on the main line during the year.

New telegraph signals were provided at the following stations :—

Plumsweep.	Brown's Point.
Hampton.	Halifax.
Richmond.	Harlaka Junction.
Forestdale.	Aston Junction.
Moose Park.	Mitchell.

Necessary repairs were made to all semaphores, switches and station telegraph signals throughout the line, where required.

SIDINGS.

During the year 7·01 miles of additional siding accommodation has been provided at different points throughout the line.

FENCE BUILT BY CONTRACT.

During the year 59·60 miles of Strathy wire fence was built at different points on the line.

FENCE BUILT BY OUR OWN MEN.

40·56 miles new page wire and 5·09 miles of second-hand barbed wire fence were built at different points on the line.

Necessary repairs were made to fences throughout the line.

SNOW FENCES.

There was built during the year 95 rods of stationary snow fence, 10 feet high, and 1,011 rods of portable snow fence.

Necessary repairs were made to snow sheds and snow fences where required.

WHARFS AND TRESTLES.

Repairs.

Point du Chene, wharf.
St. John, ballast wharf.
St. John, coal trestle.
Courtney Bay, breakwater.
St. John, fenders on long wharf.
St. John, flooring at ballast wharf.
St. John, flooring long wharf.
St. John, winter port wharf.
St. John, D. A. R. drop.
Little Forks, cribwork.
Springhill Junction, coal trestle.
Halifax, repairs to pier No. 2.
Halifax, repairs to pier No. 3.
Halifax, repairs to pier No. 4.
Halifax, repairs to pier No. 5.
Halifax, repairs to pier No. 6.
Halifax, repairs to pier No. 7.
Halifax, repairs to pier No. 8.
Halifax, repairs to pier No. 9.
Richmond, coal trestle.
Lock Broom, cribwork.
Tatamagouche, cribwork.
Stellarton, trestle.
Pugwash, wharf.
Pictou, copper crown trestle.
Pictou, cribwork.
Pictou Landing, wharf.
Murphy's, cribwork.
Mulgrave, wharf.
Moir's, cribbing.
Point Tupper, wharf.
Orangedale, cribbing.
Sydney, wharf.
Newcastle, coal trestle.
Newcastle, wharf.

Indiantown, cribwork.
Lévis, cribwork.
Point Lévis, Princess pier wharf.
Drummondville, coal trestle.

BRIDGES AND CULVERTS.

Repairs.

Quispamsis, overhead bridge.
Lawlor's, overhead bridge.
St. John, drawbridge.
St. John, Dorchester street bridge.
St. John, bridge long wharf.
Sackville, overhead bridge.
Dorchester, overhead bridge.
Lynches, bridge.
Wentworth, culvert.
Halifax, North street, overhead bridge.
Waverley, bridge.
Dartmouth, culvert.
Haliburton's, bridge.
Tatamagouche, bridge.
French River, bridge.
Waugh's River, bridge.
Dewar's River, bridge.
Wallace River, bridge.
Middle River, bridge.
Pugwash, bridge.
West River, draw.
Pine Tree, bridge.
Sutherland River, bridge.
James River, bridge.
New Glasgow, bridge.
Pomquet, bridge.
New Glasgow, west of, bridge.
New Glasgow, culvert.
Marshy Hope, bridge abutments.
Merigomish, culvert.
South River, bridge.
Afton, culvert.
Orangedale, culvert.
Point Tupper, wharf.
North Sydney, wharf.
Boisdale, east of, culvert.
Beaver Cove, west of, culvert.
Beaver Dam, bridge.
Beaver Dam, culvert.
Caribou Crossing, bridge.
Cleveland, bridge.
Morrison's, bridge.
Christmas Island, culvert.
Cumming's, bridge.
River Denys, bridge.
Grand Narrows, bridge.

Chatham Junction, culvert.
Moncton, west of, culvert.
Adamsville, culvert
Bathurst, north of, overhead bridge.
Salmon Lake, culvert.
Near Campbellton, culvert.
Near Matapedia, culvert.
Near Causapscal, culvert.
Near Amqui, culvert.
Near Flat Lands, culvert.
Near St. Octave, culvert.
Near Cedar Hall, culvert.
Near St. Moise, culvert.
Near Assametquaghan, culvert.
Trois Pistoles, overhead bridge.
Trois Pistoles, culvert.
St. Henri, bridge.
St. Romuald, culvert.
St. Jean Chrysostome, culvert.
St. Valier, culvert.
Between Hadlow and Chaudière Curve, culvert.
Trois Saumons, bridge.
Ste. Anne, culvert.
Ste. Louise, culvert.
Aston, east of, culvert.
Mitchell, west of, culvert.
St. Nicholas, west of, culvert.
St. Leonard, west of, culvert.
Bagot, culvert.
St. Eugene, ¼ mile west of, culvert.
Between St. George and Ste. Rosalie, six culverts.
St. Leonard, east of, two culverts.
Duncan, east of, culvert.
St. Eugene, ¾ mile west of, culvert.
St. Leonard, bridge.
Cap St. Ignace, culvert.

BRIDGES AND CULVERTS.

New Work.

McManus', bridge.
Halifax, North street, overhead bridge from high level to power house.
Brown's Point, culvert.
Oxford Junction, culvert.
Point Tupper, culvert.
Iona, west of, culvert.
Derby Junction, southwest Miramichi bridge.
Chatham Junction, culvert.
St. Leonard bridge, west of, culvert.
St. Eugene, 1¼ miles west of, culvert.
St. Joseph, overhead bridge.

MASONRY WORK DONE.

Repairs.

Shediac, Secoudouc bridge.
Passekeag, bridge.

Penobsquis, bridge.
Athol, cattle guards.
Palmer Pond, retaining wall.
Springhill Junction, ash pit.
Springhill Junction, arch culvert.
Between Maccan and Nappan, culvert.
Dorchester Grade, two double box culverts.
Dorchester Grade, open culvert.
Westcock Tank, culvert.
Westcock Tank, 1 mile east of, two cattle guards.
Near Sackville, box culvert.
Folleigh, ½ mile west of, open culvert.
Folleigh, 1¼ mile west of, pipe culvert.
Folleigh, ¾ mile west of, pipe culvert.
Folleigh, 1½ mile east of, cattle guard.
Athol, 1 mile west, arch culvert.
Sackville, overhead bridge.
Oxford Junction, box culvert.
Oxford Junction, 1¼ miles west, box culvert.
Near Oxford Junction, culvert.
Graham's Siding, west of, culvert.
Between Truro and Murray's Siding, culvert.
Elmsdale, west of east semaphore, box culvert.
Millar's brickyard, box culvert.
Between Millar's brickyard and Stewiacke Station, culvert.
Shubenacadie, beam culvert.
Alton, culvert.
McKay's Siding, west of, culvert.
Stewiacke, box culvert.
Dickie's Mill, ¼ mile east, arch culvert.
Stewiacke west tool house, culvert.
Stewiacke ½ mile west, arch culvert.
Dewis Siding, ¾ mile west, bridge.
Dewis Siding, ¼ mile west, culvert.
Dewis Siding, ½ mile west, culvert.
Milford, 1¾ miles west of, box culvert.
Lansdown, 1 mile west of, box culvert.
Lantz Siding, east of, culvert.
Spears Siding, ¼ mile east of, pipe culvert.
Lorne Siding, ½ mile west of, box culvert.
Truro, track scale.
Brown's Point, culvert.
Tatamagouche, culvert.
Denmark, three culverts.
Pugwash, ash pit.
Pugwash, bridge.
New Glasgow, 59 miles east, box culvert.
New Glasgow, 72½ miles east, beam culvert.
New Glasgow, 72 miles east, beam culvert.
New Glasgow, 59½ miles east, box culvert.
West Merigomish, ½ mile west, culvert.
West Merigomish, 1 mile east, culvert.
Point Tupper, transfer.
North West Miramichi River bridge.
South West Miramichi River bridge.

Trois Pistoles, ¼ mile west of, culvert.
Trois Pistoles, ¾ mile west of, culvert.
Isle Verte, 4½ miles west of, culvert.
Montmagny, ¼ mile east, bridge.
Montmagny, ½ mile east, bridge.
St. Charles, east of, culvert No. 1.
Chaudiere Curve, east of, culvert No. 7.
St. Charles, east of, culvert No. 10.
St. Charles, east of, culvert No. 11.
St. Valier, west of, culvert No. 3.
St. Valier, station, culvert No. 4.
Montmagny, west of station, culvert No. 1.
Chaudiere Junction, culvert No. 5.
St. Valier Station, culvert No. 5.
Chaudiere Station, culvert No. 2.
St. Valier Station, east of, culvert No. 6.
Chaudiere Junction, 2 miles east of, culvert No. 7.

New Work.

Milford, 1½ miles west of, retaining wall.
Kinsack, ½ mile east of, pipe culvert.
Chaudiere Junction, track scales.

Alterations.

Anagance, culvert.
Penobsquis, culvert.
Athol, culvert.
Aulac, Etter aboideau.
Sackville, cattle guard torn down and culvert built.
Sackville Crossing, cattle guard torn down and box culvert built.
Elmsdale, retaining walls.
St. Charles, bridge.

Masonry.

Hilden Station, chimney foundation.
Villeroy, putting foundation under agent's dwelling house.
DeLotbinière, repairs to cellar under station.
St. Cyrille, repairs to cellar under station.
St. Wenceslas Station, putting foundation under.

Painting.

Jackson's bridge.
Campbell's bridge.
Leitches Creek bridge.
Balls Creek bridge.
Sydney River bridge.
Trois Pistoles bridge.
Grand Bic bridge.
Gilmores Brook bridge.
Clark's Brook bridge.
Sayabec bridge.
McKinnon's Brook bridge.
Nepisiguit River bridge.

Little River bridge.
Middle River bridge.
Tetagouche bridge.
Grant's Brook bridge.
Nashes Creek bridge.
Nigadoo bridge.
Eel River bridge.
Louison's Brook bridge.
Nashes Creek bridge.
Millstream bridge.
Trout Creek bridge.
Milner bridge.
Sackville, bridge.
North West Miramichi Bridge.
Murphy's 'Truss' bridge.
Murphy's roll beam deck girder, bridge.
Murphy's deck plate girder, bridge.
Yankee Grant's bridge.
St. Croix bridge.
Big Bog bridge.

BUILDINGS AND PLATFORMS.

Repairs.

St. John, shed on long wharf.
St. John, platform, ballast wharf.
St. John, platform, Wall Street bridge.
St. John, skylights, train shed.
St. John, Mill Street crossing.
St. John, bumper, No. 5 shed.
St. John, coal shed.
St. John, boat house.
St. John, tenement house.
St. John, shed on ballast wharf.
St. John, train shed floor.
St. John, freight shed floor.
St. John, door No. 2 shed.
St. John, shutters in waiting room.
St. John, Mill Street crossing gates.
St. John, drop No. 9 shed.
St. John, round house roof.
St. John, doors freight sheds.
St. John, freight shed No. 1.
St. John, freight shed No. 9.
Coldbrook, platform.
Torryburn, hand car house.
Torryburn, platform.
Riverside, station platform.
Rothsay, coal house.
Rothsay, station.
Rothsay, station shingled.
Rothsay, station platform.
Armstrong's, platform.
Quispamsis, station platform.
Model Farm, platform.

Jubilee, platform.
Nauwigewauk, station.
Nauwigewauk, platform.
Hampton, freight house.
Hampton, station.
Hampton, platform.
Passakeag, platform.
Bloomfield, station.
Apohaqui, platform.
Sussex, platform.
Sussex, station.
Plumweseep, platform.
Penobsquis, platform.
Penobsquis, station.
Penobsquis, freight house.
Anagance, station.
Anagance, freight house.
Anagance, cattle-pen.
Petitcodiac, platform.
Petitcodiac, station.
Boundary Creek, station.
Boundary Creek, platform.
Moncton, ice house.
Moncton, coal boxes.
Moncton, cattle shed.
Moncton, battery room door.
Moncton, machine shop floor.
Moncton, platform at check office.
Moncton, coal shed.
Moncton, cottages Nos. 3, 4, 5, 6, 7, 8, 10 and 11.
Moncton, round houses.
Moncton, general offices.
Moncton, freight house.
Moncton, erecting shop floor.
Moncton, switchman's shanty.
Moncton, cottages 2, 9 and 12.
Moncton, electric building floor.
Moncton, pit in erecting shop.
Moncton, station.
Moncton, station platform.
Moncton, freight house platform.
Moncton, check office.
Moncton, old station building.
Moncton, sidewalk.
Moncton, cottage.
Moncton, oilers shanty.
Moncton, sidewalk Barton's shop.
Shediac, platform.
Pt. du Chene, agent's dwelling.
Pt. du Chene, freight house.
Painsec Junction, freight house door rollers.
Painsec Junction, station.
Calhouns, freight shed.
Calhouns, W.C.
Calhouns, station.

Memramcook, freight house door rollers.
Memramcook, platform.
College Bridge, platform.
College Bridge, station.
Upper Dorchester, station.
Dorchester, station.
Evans, station.
Sackville, platform.
Aulac, handcar house.
Fort Lawrence, loading platforms.
Amherst, loading platform.
Nappan, loading platform.
Maccan, freight shed.
Springhill Junction, platform.
River Philip, freight shed.
Oxford Junction, platform.
Thomson, cattle pen.
Greenville, platform.
Greenville, freight shed.
Greenville, cattle pen.
Wentworth, platform.
Wentworth, station.
Folleigh, station.
Folleigh, dwelling apartments.
Londonderry, tank house.
Truro, freight house.
Truro, station.
Truro, blacksmith shop.
Truro, woodshed
Truro, round house.
Truro, doors express building.
Truro, doors mail room.
Truro, doors car shop.
Truro, roof of oil store.
Truro, platform.
Hilden, platform.
Hilden, station.
Brookfield, cattle pen.
Shubenacadie, w.c.
Shubenacadie, platform
Shubenacadie, office and waiting room doors.
Dewis Siding, flag station.
Milford, platform.
Milford, station.
Elmsdale, kitchen roof.
Elmsdale, cattle pen.
Elmsdale, coal house and baggage room.
Enfield, station ticket window.
Oakfield, cattle pen.
Oakfield, loading platform.
Windsor Junction, platform.
Windsor Junction, station.
Dartmouth, station.
Bedford, station.
Rockingham, station.

Richmond, cattle pens and gates.
Richmond, cattle shed.
Richmond, coal chute and trestle.
Richmond, machine shop roof.
Richmond, car shop.
Richmond, roof blacksmith shop.
Richmond, Norris house.
Richmond, coal shed.
Richmond, grain elevator.
Richmond, coal drop.
Richmond, car cleaning shed.
Richmond, floors and pit timbers in round house.
Fairview, flag station.
Fairview, erected old Rockingham station.
Fall River, platform.
Deep water terminus, coal drop and chute, pier No. 4.
Deep water terminus, roof shed No. 1.
Deep water terminus, sheds Nos. 2, 3 and 4.
Deep water terminus, elevator.
Deep water terminus, loading platform.
Deep water terminus, coal shed and chute.
Halifax, North street station.
Halifax, car cleaning shed.
Halifax, tower train shed.
Halifax, water tank, North street.
Halifax, train shed.
Halifax, shed pier No. 4.
Halifax, power house.
Halifax, train shed skylights.
Halifax, shed doors piers 3 and 4.
Halifax, coal shed.
Halifax, doors sheds 1 and 2.
Halifax, car shed floor.
Halifax, cattle pen platform.
Halifax, North street head house.
Valley, cattle pen.
Union, station.
Riversdale, station doors.
West River, loading platform.
West River, station.
West River, coal shed.
West River, freight house.
Lansdown, station.
Lansdown, freight house.
Eureka, platform.
Ferrona Junction, station windows.
Waverly, platform.
Dartmouth, station.
Dartmouth, dwelling house.
Dartmouth, platform.
Dartmouth, freight house.
Pugwash Junction, station.
Pugwash, ash pit engine-house.
Wallace, freight shed.
Wallace, platform.

Melagash, platform.
River John, station.
Meadowville, loading platform.
Scotsburn, cattle pen.
Scotsburn, station.
Scotsburn, loading platform.
Westville, freight shed room.
Westville, platform.
Pictou, cattle pen.
Pictou, ash pit in engine-house.
Pictou, freight shed.
Pictou, down spouting.
Pictou, ice house.
Pictou, baggage-room.
Stellarton, station.
Stellarton, platform.
Stellarton, scale house.
Stellarton, coal chute.
Stellarton, freight shed.
Lourds, station.
New Glasgow, freight shed.
New Glasgow, superintendent's office.
New Glasgow, platform.
New Glasgow, station.
New Glasgow, bonded wareroom.
Woodburn, coal shed.
Woodburn, station.
Merigomish, station.
Piedmont, station.
Avondale, cattle pen.
Avondale, station.
James River, station.
James River, platform.
James River, cattle pen.
Antigonish, water closet.
Antigonish, station platform.
South River, coal box.
Pomquet, station.
Bayfield, cattle pen.
Bayfield, station.
Tracadie, cattle pen.
Har. au Bouche, platform.
Har. au Bouche, cattle pen.
Pirate Harbour, engine shed.
Mulgrave, platform.
Mulgrave, baggage room.
Mulgrave, freight house.
Trenton, freight house.
Trenton, station.
Trenton, platform.
McIntyre's Lake, platform.
West Bay Road, station.
West Bay Road, platform.
Orangedale, station.
McKinnon's Harbour, platform.

Grand Narrows, station flooring.
McPhee's, station.
Boisdale, platform.
North Sydney, station.
Leitche's Creek, station.
Hawkesbury, shelter.
Sydney, freight shed.
Sydney, station.
Sydney, platform.
Berry's Mills, cellar.
Canaan, platform.
Canaan, station.
Coal Branch, cellar.
Orangeville, freight platform.
Adamsville, loading platform.
Adamsville, station platform.
Adamsville, waiting room.
Harcourt, cellar.
Kent Junction, station.
Rogersville, freight house platform.
Chatham Junction, station.
Chatham Junction, freight house platform
Chatham Junction, station platform.
Derby Junction, platform.
Millerton, loading platform.
Parker's, platform.
Newcastle, freight house platform.
Newcastle, freight shed.
Newcastle, coal shed.
Newcastle, blacksmith shop.
Newcastle, shanty cars.
Newcastle, loading platform.
Newcastle, round house.
Indiantown, station.
Indiantown, platform.
Indiantown, engine shed.
Beaver Brook, station.
Beaver Brook, tank house.
Bartibogue, station.
Red Pine, pump house.
Gloucester Junction, platform.
Bathurst, station.
Petite Roche, platform.
Elm Tree, station platform.
Belledune, loading platform.
Belledune, station.
Hodgins, loading platform.
Jacquet River, tank house.
Jacquet River, tool house.
Jacquet River, platform.
Nashes Creek, station.
New Mills, tool house.
New Mills, station.
Dickies, shelter.
Charlo, platform.

Charlo, cellar floor.
Charlo, tank house.
Dalhousie Junction, station.
Dalhousie Junction, tank house.
Dalhousie Junction, loading platform.
Dalhousie Junction, station floor.
Dalhousie, water closet.
Dalhousie, coal shed.
McLeod's, loading platform.
Campbellton, coal shed.
Campbellton, station.
Campbellton, loading platform.
Campbellton, wood shed.
Campbellton, engine house.
Campbellton, carpenter shop.
Campbellton, agent's dwelling.
Campbellton, freight house.
Campbellton, station platform.
Campbellton, window express office.
Campbellton, Canadian express office.
Campbellton, conductors' room.
Campbellton, ice house.
Campbellton, trackmaster's office.
Campbellton, round house.
Campbellton, car shop floors.
Campbellton, machine shop floors.
Shive's siding, passenger platform.
Moffats, station platform.
Matapedia, freight shed.
Matapedia, agent's house.
Matapedia, station cellar.
Matapedia, station platform.
Matapedia, snow shed.
Matapedia, foreman's house.
Matapedia, station doors.
St. Alexis, station.
Millstream, station platform.
Assametquaghan, station platform.
Assametquahan, tank.
Assametquaghan, snow chute.
Causapscal, station platform.
Causapscal, coal shed.
Causapscal, station.
Salmon Lake, station.
Salmon Lake, station platform.
Amqui, station platform.
Amqui, station.
Amqui, tool house.
Cedar Hall, station.
Cedar Hall, tank.
Cedar Hall, station platform.
Sayabec, station.
Sayabec, freight shed doors.
St. Moïse, station.
Little Metis, snow shed.

Little Metis, station platform.
Little Metis, station.
St. Octave, station seats.
Ste. Luce, station.
Ste. Flavie, station platform.
Ste. Flavie, machine shop.
Ste. Flavie, switchman's shanty.
Ste. Flavie, round house.
Ste. Flavie, freight house.
Ste. Flavie, station.
Rimouski, station platform.
Rimouski, station.
Sacré Cœur, station.
Sacré Cœur, station platform.
Bic, watchman's shanty.
Bic, station.
St. Fabien, station.
St. Simon, station.
St. Simon, station platform.
Trois Pistoles, platform.
Trois Pistoles, station.
St. Eloi, freight shed.
St. Eloi, station.
Isle Verte, station platform.
Isle Verte, station.
Cacouna, station platform.
Rivière du Loup, coal shed.
St. André, station.
Ste. Hélène, station platform.
Ste. Hélène, station.
Dessaint, cattle pen.
St. Paschal, station.
St. Philippe, station platform.
St. Pacôme, loading platform.
Rivière Ouelle, water closets.
Rivière Ouelle, station platform.
Rivière Ouelle, handcar house.
Ste. Anne, coal shed.
Ste. Anne, station platform.
Ste. Louise, station platform.
St. Jean Port Joli, station.
L'Islet, station platform.
Cap St. Ignace, station floor.
Montmagny, station.
St. Valier, tank.
St. Valier, station.
Chaudière Junction, car repairer's shop.
Chaudière Junction, agent's office.
Chaudière Junction, transfer shed.
Chaudière Curve, station platform.
Lévis, freight office.
Lévis, station.
Quebec, baggage room.
Pt. Levi, floor Rouleau's house, Chapman property.
Pt. Levi, floor Bernier's house, Chapman property.

Hadlow, ash pits
Hadlow, round house.
Hadlow, coal shed.
Chaudière, station.
St. Nicholas, station.
Laurier, storm doors for car top (agent's dwelling).
De Lotbinière, storm doors on station.
Villeroy, storm doors on station.
Villeroy, agent's dwelling.
Moose Park, station platform.
Forestdale, fitted up boxcar for agent.
St. Monique, freight shed.
Aston Junction, fitted up box car for agent.
Nicolet, station platform.
Mitchell, water closets.
Mitchell, station platform.
Drummondville, platform.
St. Germain, putting up storm doors.
St. Germain, station doors.
St. Eugene, station doors.
St. Eugene, putting storm doors on agent's dwelling.
Bagot, station doors.
St. Cyrville, platform.
St. Cyrville, freight shed.

BUILDINGS AND PLATFORMS.

New Work.

St. John, boat house.
St. John, frost-proof water tank.
St. John, cabinet for No. 9 shed.
St. John, trap door No. 9 shed.
St. John, fence in No. 7 shed.
St. John, shelves in newsroom.
St. John, frames for blue prints.
St. John, cabinet for office, King street.
Quispamsis, handcar house.
Nauwigewauk, windows in station.
Brookville, verandah at station.
Brookville, station sheathed.
Torryburn, handcar house.....
Sussex, platform.
Anagance, gates for cattle pens.
Boundary Creek, closet.
Boundary Creek, coal shed.
River Glade, new closet.
River Glade, coal shed.
Moncton, platform at paint shop.
Moncton, passenger platform.
Moncton, cupboard in yardmaster's office.
Moncton, new floor in master mechanic's office.
Moncton, blue print room in mechanical department.
Moncton, sidewalk from machine shop to check office.
Moncton, case in auditor's office.
Moncton, check office.

Painsec Junction, shanty for trackmen.
Athol, tool house.
Londonderry, coal house.
Richmond, windows in office shed No. 3.
Richmond, water closet.
Richmond, grain elevator conveyor chutes.
Halifax, platform, North street station.
Halifax, overhead truss from power house to retaining wall.
Halifax, table telegraph office.
Halifax, customs office in shed, pier No. 2.
Graham Siding, platform.
Elmsdale, shelves, baggage room.
Lantz, platform.
Malcolm's, platform.
Valley, down spouts on station.
Dewis Siding, loading platform.
Enfield, coal bin.
Truro, customs office in freight shed.
Dartmouth, shelving in station.
Dartmouth, coal bin.
Windsor Junction, kitchen in dwelling.
Brown's Point, platform.
Pictou, winter landing.
Pictou, freight shed platform.
Pictou, office in freight shed.
Pictou, w. c. in engine house.
Tracadie, frost-proof building.
Merigomish, station platform.
Trenton, station platform.
Woodburn, coal shed.
Sutherland's Crossing, platform.
North Sydney, customs ware-room and office.
Christmas Island, platform.
Christmas Island, shelter.
Cleveland, platform.
Sydney, ice chutes.
Newcastle, dry closets.
Summit, shelter.
Campbellton, office, Canadian Express Company.
Campbellton, counter for express office.
Campbellton, cupboard for trackmaster's office.
Campbellton, fitting up shanty car.
Matapedia, platform.
Matapedia, coal and oil house.
Matapedia, barn for agent.
Matapedia, seats waiting room.
Matapedia, desk for station.
Moffat's, storm windows.
Flat Lands, porch agent's dwelling.
St. Alexis, station windows.
Amqui, tool house.
Causapscal, fitting up shanty car.
St. Moise, porch foreman's dwelling.
St. Moise, storm windows.
St. Octave, porch agent's dwelling.

Metis Bridge, tank.
Metis Bridge, pump house.
Ste. Luce, hand-car house.
St. Anaclet, tank.
St. Eloi, freight shed extended.
Isle Verte, tank.
St. Arsene, coal shed.
Cacouna, coal shed.
St. Andre, loading platform
St. Andre, new sink in station.
Lévis, temporary baggage room.
Lévis, telegraph table.
Lévis, sheathing towers new station.
Lévis, shelter on engine 192.
Lévis, sheathing in mail-room and baggage-room.
Lévis, made telegraph table for Moose Park.
Point Lévis, wood shed.
St. Charles, cattle pen.
Forestdale, car house.
Moose Park, car house.
Villeroy, platform.
Aston, car house.
Aston, extended station platform.
Laurier, extended platform.
Mitchell, telegraph table.
Forestdale, fitted up box car for agent.
St. Wenceslas, water closets.

BUILDINGS AND PLATFORMS.

Alterations.

Halifax, engine shed and buffer, North street.
Halifax, grain elevator conveyor chutes.
Rockingham, taking down station.
Merigomish, fitted up box car for baggage room.
Newcastle, round house.
Campbellton, baggage master's office.
St. Octave, making dwelling out of old station.
Rivière Ouelle, moving hand-car house.
Montmagny, moving buildings.

Painting.

Mines Road, station.
McIntyre's Lake, station.
Sydney, station.
Lansdowne, station.
Pictou, station.
Mulgrave, baggage room and express office.
Rivière du Loup, station.
St. Moise, new part of station.
Causapscal, interior of station.
Causapscal, freight house.
Nashe's Creek, station.
Charlo, station.
Apohaqui, station.

Coldbrook, station.
Salisbury, station.
Armstrong's, station (flag).
Nauwigewauk, station.
Derby Junction, station.
Painsec Junction, station.
Greenville, roof of station.
Greenville, roof of freight house.
Thomson, station.
River Philip, roof of station.
Amherst, station.
Amherst, roof of freight house.
College Bridge, station.
Truro, station.
Hilden, station.
Dartmouth, station.
Dartmouth, freight shed.
Waverly, station.

GENERAL.

New buffers were made and set up at different points on the line where required.

Repairs were made to crossings at various points on the line where required.

Gates and cattle-guards were repaired and renewed throughout the line where necessary.

Necessary glazing was done and new glass put in where required. Repairs were made.

A number of old box car tops were repaired and fitted up during the year for hand-car and tool houses.

Ladders for buildings and semaphores were provided where required along the line.

Outhouses and approaches to public road crossings were whitewashed where necessary.

The new sluiceway, which was commenced last year at Etter's Aboideau, has been completed.

Turntables have been repaired throughout the line where required.

I have the honour to be, sir,

Your obedient servant,

T. C. BURPEE,

Engineer of Maintenance of Way and Works.

J. E. Price, Esq.,
General Superintendent,
Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA.

Office of the Chief Engineer,
Moncton, N.B., September 13, 1904.

Sir,—I have the honour to submit the following report on capital account expenditures for the fiscal year ending June 30, 1904:—

To increase accommodation at Sydney.

The new freight shed at York street was completed. New building for car repair shop was constructed and necessary grading for site and approach thereto done

and tracks laid and ballasted. Plans and specification were prepared and tenders were asked for a coal house with hoisting machinery. Plans and specification were also prepared for new passenger station. Concrete floor completed in engine house. Water service was extended, water being connected with new tank, and filling in and grading around foundation of tank. Twelve-inch main pipe was extended through yard, and one fire hydrant and two stand pipes put in. New tank was painted, and upright pipes inclosed in frost-proof box. A new ash pit was put in near engine house. Partition built in hot well at engine house. Additional land was purchased between York and Ferry streets for new site for freight sheds, which are to be moved from new station site.

Original construction.

Under this vote, amounts were paid for land from A. McDonald, at Dartmouth; W. A. Patterson, DeBert; Esther McLean, Long Island, C.B.; Summer Company, red pine; F. Wood and W. T. Pipes, O. & N. G. Ry. An amount was paid H. Paint for damages for closing crossing, and amounts were paid for legal expenses in connection with the above and other cases.

To strengthen bridges.

The following spans, purchased last year, have been put in place: Lydia brook, two spans 25½ feet; Scott's public crossing, one span 30½ feet; Shubenacadie bridge, one span 26½ feet; Rawdon river, two spans 31½ feet; Meadow Brookfield, two spans 22 feet; Ellis brook, one span 23 feet; Elmsdale, one span 21 feet. The following spans have been supplied and put in place: St. Joseph street, Government street, Pemquet, Pollet river, Trout creek, Passekeag, Moosehorn, St. Francis river, Bible hill, McManus' mill, Little Elm Tree, Fournier's, Beaver river, Canal, McDermid's, Hilden station, Lydia brook fifth crossing, and Charlo river. North and south crossings partly in. The following spans have been delivered, but not yet put in: New Glasgow under-crossing, Perkins', Chisholm's, Riversdale, North river, South Cocaigne, Buctouche, South coal branch, Red Pine brook, Gordon's St. Alexis, Tobogote, West Tobogote, Cedar Hall, St. Moise, St. Moise tank, Ste. Flavie No. 1, Ste. Flavie No. 2, Ste. Luce No. 1, Ste. Luce No. 2, Ste. Luce No. 3, St. Anaclet, Bic, St Fabien No. 1, St. Fabien No. 2, Trois Pistoles, Isle Verte, Halifax, under crossing, Torryburn, Brookville public crossing and Morton's mill race. The following bridges have been doubled up: Moffatt's, seven spans started last year, completed; Rimouski, five spans; Bartibogue, one span; Belledune, three spans; Elm Tree and Benjamin river, three spans now being done. Bed-plates and rollers were put under Nepisiquit river bridge, which was doubled up last year. In connection with putting in and doubling up the above bridges, temporary sidings were put in at several places and charged to this account. The necessary addition to and changes in masonry, required in connection with the above work was also done.

To increase accommodation at Lévis.

The iron work and roofs of two covered platforms were erected in place complete, and an overhead bridge supplied but not erected. Extensive concrete foundations were put in for above. A new building was erected for baggage, heating plant, &c. A temporary heating plant with steel stack was put in. Outstanding claims for land and damages were settled. A quantity of material for the concrete platforms has been supplied. The baggage building was supplied with electric lights.

Part of the freight shed was moved and placed with the old station building, which will be used for freight business. A boiler plant, with induced draft plant has been purchased and will be installed in the new baggage and heating building. A quantity of hose for fire protection was purchased and installed in the station and other buildings.

Increased accommodation at Stellarton.

The water service was extended and two stand pipes purchased and put in. New building for car repair shop erected. Also new building for storing wrecking crane. Plans and specification were prepared for a new passenger station and tenders asked on same.

Part of the yard was rearranged and some new tracks laid.

New superstructure for Restigouche bridge.

Metal work for the five spans has been supplied and two spans erected complete in place. Work has been resumed after the spring freshets and the erection of the balance of spans is well under way.

New superstructure for south-west Miramichi bridge.

The work of erecting the balance of the spans which remained over at the first of the year, has been completed, and the whole bridge is completely renewed and up to date. The old spans from this and the north-west Miramichi bridge have been transferred to Prince Edward Island Railway, and credit given this vote for same.

Improvements at Point Tupper.

The balance of the track-laying in the new freight yard was completed and material was supplied for a coal shed.

Yard for freight business at Rivière du Loup.

The track-laying for which the grading was done last year was completed.

To extend freight car repair shop at Moncton.

An extension of 345 feet by 78½ feet has been made to the freight car repair shop, and all work in connection therewith completed.

Engine house, machine shop, car shop, stores, office at Rivière-du-Loup.

A large piece of land was purchased at the west end of the yard at Rivière-du-Loup, and contract let for the erection thereon of a 24 stall engine house with annex, also turntable foundation and ringwall. Work on these buildings is underway, the foundations being all in and walls started. A quantity of track has been laid in connection with the above. Tenders have been asked for boiler plant for the heating of the buildings.

Engine house, &c., at Chaudiere Junction.

The work on the 18 stall engine house and annex, also on a brick building for machine shop, has been completed and a hot air heating plant installed.

Increased accommodation at St. John.

The work on the new 100,000 gallon elevated tank has been completed and connected up with the city water service, and pipes laid from the tank through the yard to stand pipes, which have been set up at several points. The new 18 stall engine house with annex has been completed and hot blast heating plant installed. Contract was awarded for a brick building for stores, offices, &c., and work started.

A 30-ton gantry crane was purchased for hoisting heavy freight, but not yet erected.

Several outstanding amounts for land purchased and land damages and legal expenses in connection with same were paid. Some track laying was done.

To increase accommodation at Halifax.

The property lying between the elevator property and Cornwallis Street in Water Street was purchased for the extension of the tracks through the elevator.

Work was completed in connection with installing heating, air and power plant at North Street station. Work on improvements to station was carried on.

Creosoted piling and hard pine for a pile wharf at pier No. 9 was purchased and delivered and sorted on the ground. Creosoted sheathing, square timber and round logs for a quay wall west of pier No. 9 has been ordered and partly delivered on the ground.

Contract has been let for the erection of the pile wharf, and plans have been prepared and tenders will be asked shortly for the quay wall. Some dredging has been done on the sites of the new pile wharf and quay wall.

The following additional track has been laid :—

Young Street siding extended east 224 feet.

No. 2 siding D. W. T. extended east 124 feet.

No. 10 car siding, Richmond, extended 429 feet.

Youlds siding extended 75 feet.

New track No. 6, pier 400 feet.

New platform and a culvert has been made at postal building, North Street station.

A bridge from the station to the power-house has been built, and interior of building for power plant fitted up.

Two concrete platforms were laid at the car cleaning shed.

New drain put in at head house, North Street station.

New shelving in Pullman supply department.

Moved and erected loading platform at D. W. T.

Plans have been prepared for a 30 stall engine house.

Some outstanding amounts for land taken and damages have been paid, also legal expenses.

To increase accommodation at Pictou.

Plans were prepared and considered in connection with several proposed sites for new passenger station.

Improvements at North Sydney.

Dredging was carried on at the extension of the wharf, and berths provided for large steamers. A freight shed 120 feet long was built on the extension of the wharf, forming an extension of the freight shed on the original wharf.

Plans were prepared for moving and extending freight sheds at North Sydney station.

Building a spur line of railway from I.C.R. station at Rivière Ouelle to the wharf on the St. Lawrence.

The ballasting, &c., of the branch, which was started last year, was completed, and wharf at St. Dennis prepared to carry trains.

Stations were built at St. Dennis wharf and Letellier, freight shed at St. Dennis wharf and an engine house at Rivière Ouelle station.

To increase accommodation at Moncton.

The extension of the brick car shop 200 feet x 75 feet was completed, also the erection of the coal-handling plant. Check office was moved to re-arrange approach tracks to brick car shop extension.

The new water tube boiler plant was completed and the building over it finished.

A building was erected at the station for car service offices with rooms for conductors, also their outfit boxes and the express companies' transfer business. A new electric lighting plant was procured and partly installed in the power-house.

Part of yard was re-arranged on account of extensions to car shop and at transfer shed. Water service was also rearranged and extended.

New gas holders were provided at the Pinstch gas plant.

Electric lighting was installed in the following buildings :—

Extension to blacksmith shop, coal-handling plant, extension to brick car shop, and the offices and conductors' rooms building at station.

A new dry house was provided near the boiler plant.

In the upper part of the station, the partitions and rooms were re-arranged. At the restaurant, a kitchen and cellar were provided. A new freight transfer shed was erected, 580 feet long by 18 feet wide.

Improvements at St. Alexis.

An extensive breastwork was built along bank of river at station, to provide loading ground and a guard railing provided. Roadway was diverted.

Dwelling for agent at Eel river.

The dwelling was built by contract and the ground around it graded by the railway department.

Increased accommodation at Amqui.

Plans and specifications were prepared for a new station, and tenders asked. Some grading was done for new yard.

Increased accommodation at Ste. Flavie.

Some additional land was purchased and plans and specifications prepared for a 12-stall engine house and annex. A contract was let for them. Work is now well under way. Tracks to the sites of these buildings have been laid. Plans and specifications have been prepared for a building for stores, offices, &c., and tenders asked for same. Tenders have also been asked for boilers for the heating plant for these buildings.

Towards improving ferry service at Strait of Canso.

Legal services in connection with salvage of ss. 'Scotia' were paid. Electric lighting plants, including additional boilers, &c., were provided at the terminals at Mulgrave and Point Tupper. A quantity of timber, logs, &c., were provided for a guard pier at Point Tupper, and plans and specifications prepared and tenders asked for same.

Improvements at Nicolet.

Seating was provided for a new station. New water-closets were provided and a new station platform built.

Increased accommodation at Truro.

Plans and specifications were prepared for a 30-stall engine house and surveys made of several proposed sites for same.

Improvements at Little Métis station and diverting public road.

A strip of land was purchased and a diversion of the public road from station to village graded thereon.

To increase water supply.

Surveys were made for extension to water supplies at Piedmont and Bayfield road. Land was purchased for the extension at Piedmont and a steam pump purchased for Bayfield road. Wells were provided at Ste. Helene, Ste. Rosalie and Moose Park.

Double tracking parts of line.

The work of double tracking the line between Richmond and Rockingham, including ballasting and track laying 2½ miles, has been completed, and trains between Rockingham and North street station, Halifax, are handled on double track, 4·07 miles. A contract has been let for grading a piece of line between Bedford Bridge and Windsor Junction, and work is well advanced. Plans are being prepared for grading a further portion of the line to connect the two above mentioned parts, viz., between Rockingham and Bedford, including a diversion at Birch Cove, and tenders for the work will be asked at an early date.

Protection to Grand Narrows bridge.

A quantity of stone ballast was provided to make holding for piling, to be driven at protection piers. Creosoted sheathing and timber, logs, &c., were provided and plans and specifications prepared for an extension to the guard pier. Tenders for these will be asked shortly.

New freight shed at Develuyville.

The freight house has been provided.

New Glasgow, extension to freight shed and crane for loading platform.

A 15-ton crane has been purchased but not yet placed. Surveys made and plans prepared for an extension of the freight shed.

Matapedia, new station and other improvements.

The new station was completed and provided with seating, &c. A small building was provided for oil and fuel and a building for a barn for agent. The platform at station and freight shed was extended.

Steel rails and fastenings.

During the year, new rails were laid as follows:—

14·53 miles, 110 lb. in main line.
145·16 miles, 80 lb. in main line.
2·70 miles, 80 lb. in leads.

These rails were replacing 58 and 67 lb. rails.

Dredging at Point Tupper—To pay M. Connolly interest on $61,429.07, and $16,424.09 at 6 per cent.

Payment has been made M. Connolly for the amount claimed.

To compensate Anchor Line for salvage services to ss. 'Scotia.'

Payment has been made the Anchor Line for the amount claimed.

To dredge and blast rock at deep water terminus, Halifax.

Blasting and dredging was carried on in dock between piers Nos. 3 and 4 to give a depth of 30 feet at low water, in berth at pier No. 3.

The following sidings have been put in:—

The following sidings have been put in :—

Siding at Iona to wharf		700	ft. long.
"	Belledune	2,938	"
"	Clark's Brook	1,899	"
"	Cedar Hall	1,500	"
"	Chatham Junction	2,585	"
"	Milford	800	"
"	Windsor Junction	575	"
"	Russells (Red Pine and Bartibogue)	3,437	"
"	Jacquet River	2,608	"
"	St. Moise	2,830	"
"	Kennedy's (Assametquaghan and Mill-stream)	2,569	"
"	Busby (Bartibogue and Beaver Brook	3,213	"
"	Ste. Anne, extended	2,300	"
"	Pomquet, extended	592	"

Increased accommodation and facilities along line.

The following work was done under this vote:—

At Montmagny, the section tool house was moved and a cattle pen built. Existing freight shed moved, raised and enlarged.

At Nappan, the freight shed was extended.

At Amherst, the freight shed was extended and a quantiy of material supplied for extending the water service.

St. Michael, station enlarged and freight shed provided.

Ste. Hélène, station and freight shed provided.

St. Moïse, freight shed moved and extended.

Kempt, contract for new station let and work well under way.

Ste. Rosalie, new buildings provided for station and freight shed, and additional land purchased.

St. Cyrille, plans were prepared for a new freight shed.

Painsec Junction, freight shed extended.

St. Pascal, plans prepared for additional station accommodation.

Aston Junction, a section house for three families built, and small frost-proof buildings, coal houses and privies provided.

Moose Park, a section house for three families built, and small frost-proof buildings, coal houses and privies provided, and a piece of land purchased.

Petite Roche, station and dwelling apartments were enlarged.

Harbour au Bouche, station extended and enlarged.

Pomquet, station extended.
Tracadie, plans prepared for an addition to station.
Antigonish, plans prepared for a proposed station.
Eureka, station extended and enlarged.
Avondale, freight shed extended.
St. Pacôme, a new freight shed built.
Sackville, plans prepared for station improvements.
Brookfield, station extended and enlarged.
Salmon Lake, contract let for station, additional land purchased, work partly done.
St. Léonard Junction.—Contract let for station and agent's dwelling, and work partly done.
Chaudière, plans prepared for new station.
Rimouski, new freight shed built and station accommodation improved.
Bathurst, plans prepared for toilet accommodation, drain and cesspool.
Springhill Junction, station rearranged and enlarged.
Pirate Harbour.—Plans and specifications were prepared for a new engine house and building for stores and offices, and tenders asked for same.
Bayfield Road, new station provided.

St. André, extension of siding at.

The extension has been made.

Freight houses at Elgin Road, L'Anse a Giles and Trois Saumons.

These buildings have been provided.

St. Charles Junction, bore hole for water supply.

Work on this bore hole has been done.

Campbellton, siding on wharf at.

This siding has been put in.

Sussex, platform, extension of, militia siding.

The extension of platform has been made.

Springhill Junction, bore hole for water supply.

Work on this bore hole has been done.

Siding at Pictou Landing.

A siding from Pictou Landing station to shipping pier has been graded under contract and tracks laid.

To purchase power-saw for sawing rails.

A machine for this purpose has been purchased.

PRINCE EDWARD ISLAND RAILWAY.

MURRAY HARBOUR BRANCH.

The grading, structures, &c., between Mutch's Point and Murray river have been completed and all track laid and the line ballasted, with the exception of a short portion at Mutch's Point end. The contract has been let for the buildings and platforms, and the work is well under way. That portion of the line between Murray river and Murray harbour is being graded, and the work is well advanced.

HILLSBOROUGH RIVER BRIDGE.

Substructure.

North approach.—During the year 83 cribs have been placed along the toe of the slope, making the total number 151. There remains about 25 more to be built and placed to complete this work. A steam shovel has arrived, and will in a few days be placed at work in a borrow pit situated on the main line about 1½ miles from Charlottetown. The material will be transported by locomotives and cars to complete the embankment. A trestle has been built by the contractor extending from the shore to the north abutment for the purpose of doing this work.

Abutment A.—The foundation of this abutment was prepared by the pneumatic process. After the site had been bored and blasted, the material down to an elevation of 54·5 was removed by the dredge. The caisson was towed to the site on September 12, 1903, and the timber work completed there; it was finally placed in its position on October 12. Concreting was begun on September 23, and completed on October 17. Air was put on November 6, and the excavation completed on the 16th, when filling the pneumatic chamber with concrete began. This was completed on the 19th. The shoe finally resting at an elevation of 42·92. Stone masonry was begun November 22, and completed on December 9. The space outside the caisson due to dredging has been partly filled with mud. The completing of the mud protection, the riprapping and some pointing remain to be done.

Pier 3.—The stone masonry on this pier was completed July 14.

Pier 5.—Stone masonry was completed on this pier July 18.

Pier 6.—The foundation for this pier was prepared by the pneumatic process. The site was first bored and blasted and the material removed by the dredge to an elevation of 14.00. The caisson was towed to the site on Aug. 24, and grounded in position on Aug. 29. The concrete in the body of the pier was completed on Sept. 10. Air was put on Sept. 18, and the pneumatic excavation completed Oct. 6, the shoe resting at an elevation of 7.37. The concrete in the air chamber was completed on Oct. 11. The stone masonry pier was begun Oct. 15, and completed on the 28th. The space outside the caisson in consequence of the dredging, has been filled with mud to the original bed of the river. The riprapping yet remains to be done.

Pier 7.—The foundation for this pier was prepared by the pneumatic process. The site being bored and blasted, the material was removed by dredging down to an elevation of 7.20. The caisson was moved to its site July 31, and was grounded and placed in position Aug. 6. The concrete in the body of the pier was completed on Aug. 19. Air was put on Oct. 12, and the excavation completed Oct 28. Filling the air chamber with concrete began Oct 29 and was completed on Nov. 4. Stone masonry was begun on Nov. 5 and completed Nov. 14, when a portion of the riprapping was done. The space around the caisson due to the dreging has been filled with mud to the original bottom. There remains the riprapping to complete.

Pier 8.—Stone masonry on this pier was completed July 18. Nearly all the riprapping required was done Sept. 11 and 12.

Pier 11.—Nothing was done to this pier during the year, it was previously completed to the top of the cutwater. The stone masonry and the riprapping will be completed in a short time.

Abut B.—The caisson was finally placed in its position July 3 and the stone masonry completed Aug. 22. It has been protected with mud and the riprap completed.

South approach.—Nothing done.

General.—There remains yet some mud protection and riprapping of slack spots around nearly all the piers to be done. During the year 575,948 feet B.M. of timber and 204,964 lbs. of iron have been placed in the work; 2,384 cubic yards of material have been excavated in pneumatic foundations; 8,412 cubic yards of concrete and 2,279 cubic yards of stone masonry were laid; 71 cribs have been built; 7,130 cubic yards of mud placed around pile foundations for protection: 10,575 cubic yards of riprap were placed around the piers and in the cribs. The contractor stopped work on Dec. 15, 1903, and recommenced on May 18, 1904.

SUPERSTRUCTURE.

A contract has been let for transporting and erecting the superstructure and putting on the floor and sidewalks of the bridge. Part of the metal work of the spans has been shipped from the Miramichi bridges and is partly delivered at Charlottetown. Part of the additional parts for floor and sidewalk brackets have also been shipped from the maker's works at Montreal, and the erecting stages and storing wharf is built at Charlottetown. A quantity of plant, scows, &c., are on the ground. The new swing span has been manufactured but is not yet in place.

Connection between the main line of the P.E.I Rly. and the Hillsborough bridge.

Grading was begun on June 1 and is now in progress. The embankments are being made up from materials borrowed near Curtis Creek on the main line and transported by locomotive and cars. About 3,000 yards have been placed in the work, and all the track amounting to 0.44 miles laid.

To straighten line at Curtis' Creek.

The work of grading and building the structures on this division has been let by contract, and the grading is partly done, and a quantity of material for the work delivered on the ground.

I am, sir, your obedient servant,

WM. B. MACKENZIE,

Chief Engineer.

D. POTTINGER, Esq.,
General Manager, Government Railways,
Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL ACCOUNTANT,
MONCTON, N.B., August 25, 1904.

DEAR SIR,—I beg to submit the following report of the operations of this department for the fiscal year ended June 30, 1904.

A. Statement showing the number of locomotives and various classes of cars.

B. Statement showing the locomotive and car mileage and the average number of passenger and freight cars hauled per mile run by engines.

C. Abstract of locomotive returns.

D. Statement of the cost of locomotive power for each month during the year.

E. General statement of the expenses of the mechanical department. Also a summary of the principal work done in the locomotive and car shops at Moncton, and in the shops at Richmond and River du Loup.

During the year the following were purchased on capital account and added to the rolling stock of the railway: 10 freight and 2 shunting locomotives, 8 first-class passenger coaches, 4 sleeping cars, 6 second-class sleeping cars, 207 box cars (80,000 pounds capacity), 9 auxiliary cars and 1 air-brake instruction car was built in the shops at Moncton also on capital.

Five passenger locomotives were purchased and 3 built in the Moncton shops to replace 8 of the smaller locomotives condemned.

One second-class sleeping car, 3 express and baggage cars, 240 box, 8 refrigerator, 175 platform cars were purchased, and 15 box, 13 platform, 1 hopper, 2 large coal cars and 8 vans were built in Moncton shops, all to replace an equal number of smaller cars condemned.

I am, yours very truly,

J. J. WALKER,

Mechanical Accountant.

G. R. JOUGHINS, Esq.
Superintendent Motive Power,
Moncton, N.B.

The following work was done in the locomotive shops at Moncton: Three new locomotives were built ; 61 received general, 22 received specific and 48 received heavy repairs. Three boilers were built, 1 fire-box was made, 2 tube sheets and 4 side sheets and 4 half side sheets were applied, 16 smoke boxes were patched, 10 complete smoke boxes and 35 smoke box doors and rings were made and applied. 1,090 new tubes, and 23,055 tubes were repaired, and put in boilers of locomotives. Ninety-one boilers were tested. 5 steel and 4 wood tender frames, 4 tender tanks and 150 locomotive smoke stacks were made. 4 steel cabs were repaired, 24 fire boxes were patched, 3 steel cabs were made and 5,694 new stay bolts were put in fire boxes. 321 pairs driving wheel tires and 407 pairs engine truck and tender truck wheel tires were turned, 92 new driving wheel tires and 12 new driving wheel axles were turned, 6,670 engine studs were turned and screwed, 115,470 pounds of nuts were tapped, 420,000 bolts were threaded and 27 engine truck axles were fitted up. Eight locomotive cabs and 72 locomotive pilots were built. 278 locomotive and tenders were painted.

In addition to the above there was a large amount of work done in the shops for the Strait of Canso ferry service.

In the blacksmith shop the following work was done :—469,114 bolts were forged and 2,000,410 pounds of other forgings were made.

In addition to this the following work was done for the Maintenance of Way Department :—327 new frogs were made, 115 old frogs were repaired, 30 new switches were made, 25 old ones repaired, 247 guard rails and 15 pairs split rails for switches and 1,250 pairs jog plates were made.

Special work was done as follows :—

The installation of the 4 new Babcock and Wilcox boilers ; to supply power and heat to the locomotive shops, round-house, car shops, mechanical offices and stores department, was completed.

A large amount of work was done in placing new machinery received on capital account, and in order to instal some of these machines and to increase the power for

the drop pit, the old rope power transmitter was done away with and replaced by a new steel shaft.

A large amount of work was also done in changing the position of some of the machines in the shops.

The old boiler room, having been done away with, was fitted up as a tender shop for steel tenders, and a new overhead travelling hoist for handling ash pans, &c., was placed in the boiler shop.

There was erected in the blacksmith shop one new stationary 125 horse-power high speed engine, and a large bull doser was installed. One new blast and 1 new exhaust fan, and 8 Buffalo down draft patent forges were placed in position.

The following is the output of the brass foundry :—

42,898 lbs. castings.
287,988 lbs. bearings.
7,309 lbs. antimonial lead.
960 lbs. metallic packing.
14,249 lbs. babbit metal.

MONCTON CAR SHOPS.

The following cars were built at Moncton : 1 Westinghouse air brake instruction car, on capital account, 8 conductor's vans, 13 platform cars, 15 box cars, 2 coal cars and 1 hopper on revenue to replace an equal number condemned.

The 15 cars are of 60,000 lbs. capacity to replace a similar number of lighter capacity and the hopper 15 tons to replace one of lighter capacity.

The following cars received heavy repairs: 1 official, 6 parlor, 17 sleeping, 4 dining, 42 first-class, 33 second-class, 9 second-class sleeping, 12 postal, 21 baggage, 15 freight vans, 5 snow ploughs, 9 flangers, 5 wing ploughs, 216 freight cars and 1 steam crane.

The following cars received light repairs: 10 sleeping, 4 dining, 63 first-class, 44 second-class, 14 second-class sleeping, 25 postal, 30 baggage cars, 33 freight vans, 6 flangers, 5 snow ploughs and 8 wing ploughs.

The following cars were burnt off, re-painted and varnished :—4 first-class, 11 second-class, 1 postal, 4 baggage and 1 freight van.

The following cars were scraped, filled, stained and varnished :—1 parlor, 1 sleeping, 10 first-class, 1 second-class, 2 second-class sleeping, 3 postal and 8 baggage.

The following cars were painted and varnished :—1 parlor, 7 first-class, 10 second-class, 5 postal, 4 baggage and 16 freight vans.

The following cars were renovated and varnished :—1 official, 4 parlor, 13 sleeping, 3 dining, 22 first-class, 11 second-class, 3 second-class sleeping, 6 postal and 6 baggage.

The following cars were re-painted :—173 box, 131 platform, 30 gondolas, 1 hopper, 12 stock, 4 refrigerator, 5 flangers, 3 wing ploughs and 4 snow ploughs.

Special work was done as follows :—92 wooden trucks were built, 38 Sterlingworth steel trucks were put under freight cars. 5,512 new, 1,710 second-hand chilled wheel and 108 new and 200 second-hand steel wheels were pressed on axles, 893 new axles turned, 655 freight cars and 2 flangers were changed from link and pin to M. C. B. couplers, 17 passenger cars were changed from Miller to master car builder's coupler, 6 passenger cars, 112 freight cars, 1 wing plough and 4 freight vans were fitted with the Westinghouse air-brakes. 31 passenger cars had the Westinghouse air-brake changed from the old automatic to the emergency, &c.

Thirty-eight passenger cars were fitted with the Westinghouse air signal appliance. 51 passenger cars were fitted with the American slack adjuster. 6 passenger cars were fitted with Pintsch gas. 6 passenger cars were fitted with wide vestibules.

In addition to the lumber prepared for the above repairs, 680,000 feet was milled on store orders.

A large amount of work was also done to freight and baggage car trucks, chairs, ticket cases, station furniture and foot boards on account of store No. 1.

There were also 42 hand cars built and 30 heavily repaired, 20 push cars built and 16 heavily repaired.

RIVER DU LOUP SHOPS.

26 locomotives received general, 13 heavy, 31 medium, and 42 specific repairs. 15 fire boxes were patched. 29 boilers were retubed. 196 pairs of engine truck, tender and car wheels and 90 pairs of driving tires were turned.

Fourteen pilots and 2 tender frames were made and put in service.

Sixty-two engines and tenders were painted.

6,042 bolts were forged.

14,312 bolts were screwed.

4,046 studs were screwed.

RICHMOND SHOPS.

Two locomotives received heavy, 11 general, 3 medium and 96 specific repairs. 7 fire boxes were patched, 9 boilers were retubed. 173 pairs of engine truck, tender and car wheels and 30 pairs of driving tires were turned.

Five pilots and 2 tender frames were built and put in service.

35,000 bolts were forged.

41,000 bolts were screwed.

1,000 studs were screwed.

WATER SERVICE.

This has been maintained in efficient condition all over the line.

A. INTERCOLONIAL RAILWAY.

STATEMENT showing the number of Locomotives and the various classes of Cars on the line on July 1, 1903, and June 30, 1904.

	Locomotives.	First Class Sleepers.	Second Class Sleepers.	Parlour Cars.	Dining Cars.	First Class Passenger.	Second Class Passenger.	Postal and Smoking.	Express and Baggage.	Air Brake Instruction.	Box.	Refrigerator.	Platform, 10, 15, 20 and 30 ton.	Oil Tank Cars.	Hopper, 6 and 15 tons.	Gondolas, 15 and 20 tons.	Coal Cars, 20 tons.	Stock Cars.	Auxiliary Tool Cars.	Vans.	Total.	Snow Ploughs.	Wing Ploughs.	Flangers.	Steam Ploughs.	Total.	Steam Cranes.
On hand serviceable July 1, 1903	287	27	24	5	7	107	92	32	47	..	5,087	76	2,546	15	785	42	537	120	10	95	9,654	49	10	22	2	83	3
Condemned, July 1903	3	...	1	...	...	2	1	...	3	...	192	8	89	...	214	12	56	3	..	4	585	...	...	...	...	...	...
	290	27	25	5	7	109	93	32	50	..	5,279	84	2,635	15	999	54	593	123	10	99	10,239	49	10	22	2	83	3
Received on capital account	12	4	6	...	...	8	...	...	...	1	207	...	...	...	...	...	...	...	9	...	235	...	...	...	...	...	...
Changed from large coal to platform	...	...	...	...	...	..	...	...	...	..	...	...	51	...	...	...	51	...	...	...	...	...	...	...	...	...	...
	302	31	31	5	7	117	93	32	50	1	5,486	84	2,686	15	999	54	542	123	19	99	10,474	49	10	22	2	83	3
Condemned July 1, 1903	3	...	1	...	...	2	1	...	3	...	192	8	89	...	214	12	56	3	...	4	585	...	...	...	...	...	...
Condemned during year	8	...	...	...	...	...	...	...	...	.	63	2	48	...	14	6	11	1	...	4	149	1	...	...	...	...	...
	11	...	1	...	...	2	1	...	3	...	255	10	137	...	228	18	67	4	..	8	734	1	...	...	...	...	...
Less rebuilt	8	....	1	...	...	...	...	...	3	....	255	8	137	...	1	...	53	...	...	8	466	..	...	...	...	...	...
To be rebuilt	3	...	...	...	...	2	1	...	...	...	....	2	...	...	227	18	14	4	...	...	268	1	...	...	...	...	...
Add serviceable and repairing	299	31	31	5	7	115	92	32	50	1	5,486	82	2,686	15	772	36	528	119	19	99	10,206	48	10	22	2	83	3
Total	302	31	31	5	7	117	93	32	50	1	5,486	84	2,686	15	999	54	542	123	19	99	10,474	49	10	22	2	83	3

MONCTON, N.B., June 30, 1904.

J. T. WALKER,
Mechanical Accountant.

E.—INTERCOLONIAL RAILWAY.

STATEMENT of Locomotives and Car Mileage, year ending June 30, 1904.

Month.	Locomotive Mileage.		Car Mileage.				Snow Ploughs.	Average Passenger.	Average Freight.
	Passenger.	Freight.	Passenger.	Express, Postal and Baggage.	Freight.	Total.			
1903.									
July	252,511	303,128	1,024,865	132,815	5,128,872	6,886,552		5·77	17·89
August	240,842	287,204	989,615	124,205	5,143,951	6,557,771		5·87	17·91
September	231,868	291,955	974,090	417,916	5,089,496	6,481,502		6·00	17·43
October	217,294	323,348	833,136	379,992	5,747,736	6,960,864		5·58	17·78
November	195,817	307,113	711,095	351,136	5,543,729	6,605,960	32	5·42	18·05
December	211,411	338,197	773,028	375,354	5,639,190	6,787,572	8,393	5·44	16·67
1904.									
January	207,667	321,773	707,454	348,026	4,802,788	5,858,268	20,680	5·09	14·93
February	200,435	306,659	683,615	338,076	4,452,306	5,473,997	36,811	5·40	14·52
March	215,520	368,725	771,055	366,244	6,165,094	7,302,393	17,944	5·28	16·72
April	208,217	374,949	781,833	360,761	6,934,634	8,077,228	598	5·48	18·49
May	205,730	344,338	739,374	361,796	6,098,536	7,199,706		5·35	17·72
June	224,868	323,710	871,060	402,272	5,565,614	6,838,946		5·66	17·19
	2,612,180	3,891,399	9,860,220	4,558,593	66,611,946	81,030,759	84,458	5·52	17·12

MONCTON, N.B., June 30, 1904.

J. T. WALKER,
Mechanical Accountant.

C.—INTERCOLONIAL RAILWAY.

ABSTRACT of Locomotive Returns for year ended June 30, 1904.

MONTHS.	CONSUMPTION.						AVERAGE CONSUMPTION PER 100 MILES.				
	Hours in Steam.	Locomotive Mileage.	Tons of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste	Miles run to 1 hour in Steam.	Pounds of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.
1903.											
July	68,311	703,536	26,329	29,868	14,883	13,629	10·29	8,383	4·24	2·11	1·93
August	64,246	664,579	25,218	27,183	12,980	12,301	10·34	8,499	4·13	1·95	1·85
September	65,027	661,167	25,138	27,609	12,989	12,813	10·16	8,618	4·17	1·96	1·93
October	67,807	684,894	28,021	28,238	12,992	12,906	10·10	9,161	4·12	1·89	1·88
November	63,638	636,907	27,112	27,399	12,307	12,197	10·00	9,535	4·30	1·93	1·96
December	70,143	695,841	32,105	30,174	13,013	13,911	9·87	10,335	4·37	1·87	2·00
1904.											
January	68,260	673,116	31,318	29,182	12,602	13,513	9·86	10,422	4·37	1·87	2·01
February	71,190	663,747	30,749	30,798	13,243	13,542	9·33	10,377	4·64	1·99	2·04
March	77,241	746,996	34,872	36,747	15,257	16,316	9·67	10,457	4·91	2·04	2·18
April	72,239	727,333	31,905	35,201	14,811	16,267	10·06	9,826	4·83	2·03	2·23
May	63,770	684,801	26,963	32,016	14,060	15,196	10·25	8,820	4·68	2·05	2·22
June	65,822	681,938	26,898	33,741	14,375	15,238	10·36	8,835	4·94	2·10	2·23
	820,994	8,224,858	346,928	368,996	163,545	168,132	10·01	9,418	4·48	1·98	2·04

MONCTON, N.B., June 30, 1904.

J. J. WALKER,
Mechanical Accountant.

D. INTERCOLONIAL RAILWAY.

STATEMENT of the cost of Locomotive Power for each month from July 1, 1903, to June 30, 1904.

Month.	Miles run by Locomotives.	Superintendence.	Engine-men's Wages.	Fuel.	Oil and Waste.	Repairs to Engines, Tenders and Tools.	Water.	Engine Houses and Turntables.	Total.	Average per 100 Miles.							
										Superintendence.	Wages.	Fuel.	Oil and Waste.	Repairs.	Water.	Engine Houses and Turntables.	Total.
1903.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.								
July. ...	703,536	1,366 18	44,371 59	94,955 13	2,732 38	40,914 39	1,843 95	3,972 03	190,155 65	·19	6·32	13·50	·39	5·81	·26	·56	27·03
August ...	664,579	1,210 75	43,890 85	92,030 68	2,442 59	38,045 31	6,813 56	4,050 10	188,483 84	·18	6·60	13·85	·37	5·73	1·02	·61	28·36
September..	661,167	1,152 24	42,256 28	94,401 90	2,560 16	31,080 64	2,004 25	3,597 06	177,052 53	·17	6·39	14·28	·39	4·70	·30	·54	26·77
October....	684,894	1,227 41	45,088 36	104,639 90	2,722 03	39,756 23	3,539 13	4,553 28	201,526 34	·18	6·58	15·28	·40	5·80	·52	·66	29 42
November .	636,907	1,096 45	42,640 92	101,311 18	2,860 11	39,079 32	4,979 10	5,673 62	197,640 70	·17	6·69	15·91	·45	6·14	·78	·89	31·03
December ..	695,841	1,118 49	74,049 66	118,082 00	2,913 04	43,538 52	5,920 38	5,860 37	251,482 46	·16	10·64	16·97	·42	6·26	·85	·84	36·14
1904.																	
January ...	675,116	1,147 79	73,776 46	109,541 39	2,924 56	41,567 17	4,063 89	7,025 97	240,047 23	·17	10·96	16·27	·43	6 18	·61	1·04	35·66
February ..	663,747	1,241 21	52,486 03	111,897 82	3,048 98	49,919 70	6,057 29	6,845 09	231,496 12	·18	7·91	16·86	·46	7·52	·91	1·03	34·87
March.....	746,996	1,196 38	56,307 70	120,612 93	3,406 89	35,076 88	5,754 64	5,361 21	227,716 63	·16	7·54	16·15	·46	4·69	·77	·71	30·48
April.....	727,333	1,438 82	52,494 97	103,722 01	2,837 78	44,045 69	1,773 14	4,831 33	211,143 74	·20	7·22	14·26	·39	6·06	·24	·66	29·03
May.	684,801	2,112 68	51,877 50	94,163 18	2,680 27	47,257 91	3,255 73	4,104 70	205,451 97	·31	7·57	13·75	·39	6 90	·48	·60	30·00
June.....	681,938	2,064 26	52,471 59	89,569 13	2,919 68	142,359 11	2,053 59	3,287 69	294,725 05	·30	7·69	13·14	·43	20·88	·30	·48	43·22
	8,224,858	16,372 66	631,711 91	1,234,927 25	34,048 47	592,640 87	48,058 65	59,162 45	2,616,922 26	·20	7·68	15·01	·41	7·21	·58	·72	31·81

MONCTON, N.B., June 30, 1904.

J. J. WALKER,
Mechanical Accountant.

E.—INTERCOLONIAL RAILWAY.

GENERAL STATEMENT of the Expenses of the Mechanical Department, year ended June 30, 1904.

The miles run by trains	6,503,579
" " engines	8,224,858
" " cars	81,030,759
" " snow ploughs	84,458
Cost of locomotive power	$2,616,922 26
Cost of car repairs—	
Repairs to passenger cars	$181,201 65
" postal, express and baggage cars	54,354 50
" freight cars and vans	601,030 04
Oil and waste for packing	8,890 72
Repairs to snow ploughs and flangers	6,611 71
	$852,088 62
The cost of locomotive power—	
Per 100 miles by train	$40 24
" " engines	31 81
" " cars and ploughs	3 22
The cost of repairs to cars and ploughs	
Per 100 miles by train	$13 10
" " engines	10 36
" " cars and ploughs	1 05
The cost of oil and waste for packing—	
Per 100 miles by train	$0 13
" " engines	0 11
" " cars and ploughs	0 01
The cost of repairs to cars per mile run by them—	
Passenger	$1 83
Postal, express and baggage	1 19
Freight cars and vans	0 90
Ploughs and flangers	7 82

J. T. WALKER,
Mechanical Accountant.

MONCTON, N.B., June 30, 1904.

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1903.							
July 3..	18.35	.....	Special.....	.....	J. Scott.....	122	Riv. du Loup yard ....
" 4..	6.10	.....	"	A. G. Cameron..	J. Gallivan.....	174	N. Sydney Jct.....
" 4..	3.00	.....	"	W. Brownrigg..	J. S. Mitchell.....	230	New Glasgow.....
" 6..	13.40	.....	"	G. M. Armstrong.	A. Wood.....	17	Amherst.....
" 8..	10.00	89	Freight...	B. Wood.....	H. D. Thompson..	13	Pugwash Jct.. .. ....
" 8..	11.00	.....	Shunter..	Jos. Boyer.....	W. Savidant....	248	Cedar Hall.....
" 8..	17.00	...	Working .	J. Doiron.....	W. Duncan.....	258	2 miles West Metapedia
" 9..	6.00	.....	.....	.....	.....	.....	West of Petitcodiac.. .
" 11..	2.40	.....	Special...	J. Guay.....	—Ouellet.....	72	Lévis. .....
" 15..	14.45	.....	Working .	W. N. Bovard...	M. O'Shaughnessy	269	Kent Junction.....
" 20..	7·25	.....	.....	E. L. Watts ...	T. G. Scott..	9	Dalhousie wharf.....
" 25..	10.16	24	Freight...	G. W. Hopper ...	R. Kennedy.....	281	Amherst.....
" 29..	.....	.....	Shunter..	.....	A. McGrath	.....	D. W. T. Halifax.....
Aug. 3..	16.30	75	Freight...	J. W. Henderson..	E. Rushton.....	282	Rogersville tank.....
" 3.	8.07	36	Express ..	M. Cummings	R. Bulmer.....	62	Eel river.....
" 15..	13.10	3	" ..	Jas. Daley.... ...	T. Wilkins.	36	Pointe du Chêne.....
" 18..	8.15	.....	Pilot. ...	A. Laliberté . ..	R. Jamieson.....	195	Daveluyville... .....
" 18..	9.45	.....	Special...	J. Michaud. . . .	W. Fraser.....	223	McGregor's sdg. . . . .
" 20 . .	. .	. . .	Shunter..	.....	B. Lutz	122	Campbellton ....
" 21..	24.45	.....	Pic-nic (special)	H. A. Baker.....	F. Chisholm.....	151	Brookfield..... .....
" 22..	23.00	...	Shunter..	.....	F. Gagnon..	120	Ste. Flavie yard .....
" 27..	8.15	.....	Special...	Geo. M. Armstrong	N. Sinclair.....	17	Amherst.....
" 29..	18.35	.....	" ...	.....	W. Anderson.....	286	St. John..... .....
" 30..	21.15	....	Shunter..	.....	C. Coleman	190	Halifax yard . ....
" 31..	11.00	.....	Special...	W. A. Fleming ..	H. Cummings	207	Stellarton. .... .:.
" 31..	10 00	....	Shunter..	.. . .	A. McGrath...	188	Halifax yard .... ..
" 7..	23 20	76	Freight...	F. Côté.....	Jos. Collet.. .. .	.....	Ste. Rosalie Jct.....
Sept. 2..	..	.....	... .	....	.....	.....	Springhill Jct..... ..
" 3	..	.....	.....	.. ..	....	.. .	North St. Station... .
" 6 .	8.45	33	Express ..	W. A. Mitchell...	H. C. Goddard. ..	171	St. Lambert..... .
.....	.....	.....	.....	....	J. Dussault....	61	....
Sept. 8..	18.30	.. .	Working .	J. Doiron	W. Duncan... ...	250	Millstream..... ...
" 11..	9.15	.....	Special...	E. Herritt.....	A. Probert.....	101	Acadia yard..... ..
" 12..	7.00	. ...	Special....	....	....	...	Fraser Bros. Sdg.. . . .
" 12..	21.25	.....	Special....	F. Walsh..	C. Skinner.....	87	Richmond... . . . ..
" 16..	10.45	.....	Special....	R. Doyle	R. Wilson	280	Rockingham.... ..
" 16..	.....	33	Express ..	.. ..	H. Atkinson.....	.....	Ste. Madeline.. ...
.....	.....	76	Freight...	....	Jos. Dussault.....	.....	....
.....	.....	.....	....	....	....	..	....
.....	.....	.....	....	....	....	.....	....
Sept. 25..	2.00	..	Special....	G. A. McKay.....	J. Hayward.....	225	Albion.....
" 25	24.30	.....	Shunter..	....	W. Megarity.	189	St. John yard.....
Oct. 3..	21.00	D. A. Ry. 94	Mixed....	— Frizzle.....	C. Stockall.	24	Richmond.....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ended June 30, 1904.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
A. Berubé	Brakeman	While coupling cars	Slightly injured.	
J. E. McNeil	"	While uncoupling cars	2 fingers injured.	
Anthony Costa	"	While shunting	Foot injured	
R. J. Ward	"	"	Finger injured	
J. D. McNeil	"	"	Foot injured	
Eug. Charest	"	"	"	
A. Dassiglvas	Water boy	Foot caught between draw-bars	Foot bruised	
Jos. Roe	Neither	Found dead on track by section-man.	Fatal	Accidental.
J. Guenette	Passenger	Found in Lévis yard	Arm cut off	
Fred. Carey	Fireman	While coaling engine	Finger slightly injured.	
T. Sullivan	Brakeman	While coupling cars	Slightly injured.	
Roy Johnson	"	While unloading freight	Foot injured	
A. Rockwell	Car inspector	While working under cars	Leg injured.	
E. B. McAnn	Brakeman	While walking past tender struck by falling coal.	Head cut	
Miss McNaughton	Passenger	Jumped from train while in motion.	Arm broken	
Boy named Ratigan	Intending passenger.	Fell while landing from steamer at wharf.	Head cut	
E. Beaulieu (boy)	Neither	While crossing track	Fatal	Accidental.
Jos. Levesque	Brakeman	While shunting	Hips injured	
D. Jamieson	"	"	Foot injured	
Mrs. G. Brinton	Passenger	Jumped from train while in motion.	Slightly injured	
Geo. Topping	Yardman	Fell while in act of jumping on van.	Arm bruised and finger cut off.	
J. E. Trites	Brakeman	While coupling cars	Hand crushed	
Geo. Bassett (boy)	Neither.	While crossing track struck by engine.	Head bruised	
R. Stewart	Shunter	Engine colliding with gangway	Foot injured	
D. C. Johnson	Brakeman	While coupling engine to cars	Slightly injured.	
McCanty	"	While coupling cars	Fingers injured.	
Jos. Baril	Neither.	While stealing ride fell between cars.	Fatal	Accidental.
H. W. Jones	Asst. Agent	While checking train caught between cars.	Slightly injured.	
Mr. Leitch	Neither.	While walking in depot struck by brick.	Slight scalp wound.	
B. Gilchrist (boy)	Passenger	While standing in vestibule train parted.	Foot slightly injured.	
Frank LeBlanc	Brakeman	While shunting	Hand crushed.	
C. Henderson	"	While coupling cars	Two fingers injured.	
Neil Dwyer	Neither.	Found on track	Fatal	Accidental.
Emanuel Pettinco	"	While crossing track struck by train	Injured slightly.	
Isaac Byers	"	" " "	Fatal	No inquest.
H. Atkinson	Driver	Collision between trains	"	That G. D. Stinson, train despatcher, was responsible.
A. Huard	Fireman		"	
A. Bernier	Brakeman		Slightly injured.	
J. Dussault	Driver		"	
J. Taylor	Brakeman	While shunting	Hand injured	
Jas. Earle	"	While getting on car struck a switch.	One rib broken	
Les Mullins	"	While stepping off engine struck switch.	Leg slightly injured.	

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1903.							
Oct. 7..	....	133	Express .	W. Morgan.....	T. Wilkins.....	63	Petitcodiac.....
.....	.....	....	.....	.....	.....	.....	.....
" 9..	12.00	....	Shunter ..	.....	S. Watson.....	123	Moncton yard. . ....
" 12..	19 30	.....	Special....	Jas. Card.....	G. DeMill	253	Beresford.....
" 15..	6.30	.....	Special....	Geo.M. Armstrong	H. Snider.....	17	Amherst.....
" 22..	10.20	33	Express ..	B. Walker.....	O. Brock.....	76	L'Islet.....
....	.....	.....	.....	.....	.....	.....	.....
Oct. 24..	12 28	1	Express ..	T. Guinan.....	J. Hunter.....	162	1 mile West Athol. . .
" 29..	8.45	.. .	Shunter ..	.....	J. Johnson.	30	Truro.....
" 30..	7.20	.....	Special....	A. Vachon.....	Geo. Roberge.....	115	St. Charles.... .... ..
Nov. 2..	.....	.....	Shunter ..	R. Hunter.....	N. Sinclair.. . .	17	Amherst .....
" 5..	19.08	26	Express .	W. J. Ellis.....	E. White.....	73	Belmont ... .
" 5..	14.00	... ..	Shunter ..	....	G. Conway.. .. .	185	Carson's Siding..... .
" 7..	14.00	.....	Shunter ..	F. O. Moffatt.....	W. Meach.....	109	North Sydney..... ....
" 7..	.....	.....	.....	.....	....	.....	Between St. Hyacinthe and Ste. Rosalie.
" 9..	14.00	.....	Special....	J. E. McLellan...	A. Johnston	174	Jefferson's Siding.....
" 11..	7.00	. ...	Special....	S. G. Nickerson...	J. Oakleaf.....	9	Dalhousie Wharf..
" 12..	16.15	23	Freight...	H. B. Gordon.. ..	W. Gross..... ..	242	Amherst..... .....
" 13..	11.30	.....	Special....	A. Gamache	W. Duncan.....	213	Amqui..... .. ..
" 25..	19.30	.....	Shunter ..	.....	M. O'Brien.....	127	Moncton..... .....
" 26..	13.40	33	Express ..	W. A. Mitchell...	H. C. Goddard ...	172	DeLotbinière. .....
.....	.....	.....	.....	.....	.....	.....	.....
" 27..	9.45	.....	Shunter ..	D. Laplante.....	J. Scott	117	Riv. du Loup.....
" 30..	23.00	.....	Shunter ..	... .	B. Lutz....	122	Campbellton... . .....
Dec. 7..	16.00	.....	. .. .	R. D. Sharp	A. H. Fryers.....	53	Moncton .....
" 9..	16.45	.. ..	Shunter ..	....	D. McGuigan.....	118	" .....
" 24..	20.30	19	Express .	J. Martin	N. McMullin.....	161	North Sydney Junction
" 25..	9.00	.....	Shunter ..	....	W. Savidant.....	120	Ste. Flavie ... .
" 28..	18.30	.....	" ..	....	J. Kelly.....	127	Truro..... ...
" 29..	14.30	4	Mixed	W. L. Broad.....	W. J. Coffey.....	184	Hampton.....
" 31..	21.35	37	Freight...	W. F. Ferguson .	J. Smith..	31	Charlo. ....
1904.							
Jan. 1..	8.05	.. .	Special...	R. H. Hunter. ...	N. Sinclair.....	17	Amherst.....
" 2..	15.21	148	Freight...	L. Gingras..... .	G. Cloutier..	180	St. Apollinaire. .... ..
" 6..	5.00	...	Shunter ..	.....	G. De Mill.....	127	Moncton ....
" 6..	18.25	33	Express ..	C. A. Johnston.	B. Mitchell..... H. Gingras.....	199 82	St. Eugene ..... .
" 13..	6.30	.....	Special...	F. Cote.....	J. Collet..... ..	208	Hadlow ....
" 14..	10.30	.. ..	Working .	C. B. Clarke.. ...	J. Gilfillin	53	Moncton Yard.. .....
" 18..	10.30	....	Special...	S. Parent.....	P. Michaud.....	.....	Gravel Siding.....
" 21..	11.00	147	Freight...	L. N. Letarte... .	A. Guennette.....	83	Aston Junction.....
" 27.	10.40	.....	... .	M. Dussault....	L. Lenahan..... F. Hall.....	282 310	West of Hadlow.....
" 29..	12.05	.. ..	Working .	Nap. Lavesque....	E. Henderson.....	234	½ mile West Amqui....
" 28..	14.45	.....	Pilot.....	F. Laliberta	O. Rossignol	182	St. Charles Yard.....
" 25..	.....	....	Shunter ..	.....	.....	....	Stellarton.. ....
Feb. 1..	16.00	....	" ..	....	J. Johnston.....	30	Truro ....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ended June 30, 1904—*Continued.*

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
T. Wilkins	Driver	Engine derailed	Hips injured	
J. Tweedie	Fireman		Ankle sprained	
W. O. Lutes	Brakeman	While making up train struck switch.	Hip injured	
Jas. Card	Conductor	Chocking wheel	Finger injured	
W. D. Graves	Brakeman	While shunting	Two fingers injured.	
Adelard Guimond	Neither.	Struck by train while crossing track in team.	Fatal	Accidental.
Ferd. Guimond	"		Leg cut off	
David Pettigrew	"	Struck by train while crossing track.	Fatal	Accidental.
Thos. Kennedy	" (boy).	Missed footing getting on car	Foot injured	
M. Samson	Brakeman	While shunting	Hand injured	
W. J. Rogerson	"	"	"	
E. Dryden	Fireman	Jumped from engine	Leg broken	
W. Heighton	Yardmaster	Fell from tender of engine	Thumb dislocated.	
Malcolm McNeil	Brakeman	While coupling cars	Finger injured	
Mr. Nichols	Joint Agent—G.T.R. & I. C. R., St. Hyacinthe.	Found dead on track	Fatal	Accidental death.
S. N. McKinnon	Brakeman	While coupling cars	Broke his thumb	
F. Steeves	"	Struck by car while shunting	Head injured	
A. Berry and wife	Neither.	Struck by train while crossing track in team.	Slightly injured	
W. Duncan	Driver	While stepping from engine	Sprained ankle	
F. A. Murray	Brakeman	While shunting	Finger injured	
H. C. Goddard	Driver	Engine derailed	Fatal	Accidental.
R. Ruel	Fireman		Shoulder injured	
J. Lalonde	"	Putting waste under cylinder	Arm injured	
F. Steeves	Brakeman	Slipped while getting on engine	Hip injured	
J. T. Coates	Brakeman	While coupling cars	Finger injured	
L. Black	Foreman shunter.	" "	Ankle injured	
Mrs. Martin	Passenger.	Missed her footing in getting off train.	Leg broken	
M. Cote	Yardman	While coupling cars	Finger bruised	
J. H. Blair	Brakeman	" "	Head injured	
Mrs. Kilpatrick	Passenger	Jumped from train while in motion.	"	
A. Arseneau	In charge of horse.	Passing between cars, foot caught between drawbars.	Foot injured	
Miner Purdy	Brakeman	While uncoupling engine from cars.	Hand injured	
Jos. Lamontagne	Neither.	While walking on track struck by train.	Fatal	Accidental.
C. B. Scurr	Shunter	While uncoupling cars	Hand injured	
Honore Lapierre	Neither.	Team struck while crossing track	Fatal	Accidental.
A. England	Brakeman	Collision between trains	Right leg injured	
Christopher Kennan	Employee	Foot caught between drawbars	Slightly injured	
J. Proulx	Brakeman	While shunting	Back sprained	
Alp. Demaise	"	While unloading freight	Finger crushed	
Jos. Gagné	Neither.	While walking on track struck by train.	Fatal	Accidental.
J. A. Coté	"	" "	Slightly injured	
Eug. Gosselin	"	" "	Fatal	No inquest.
D. S. Halliday	Yardman	Caught between engine and cars.	Slightly injured	
W. C. Layton	Foreman shunter.	While coupling cars	Finger injured	

4-5 EDWARD VII., A. 1905

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1904.							
Feb. 2..	6.05	20	Express ..	J. Martin.....	N. McMullin	161	Sydney.....
" 2..	10.20	....	Shunter ..	.....	B. Lutz.....	122	Campbellton.....
" 3..	9.30	25	Express ..	R. G. Duncan ...	John Ross	154	Milford.....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	" ..	"	154	" .....
" 3..	9.30	25	" ..	" ...	"	154	" .....
" 3..	9.30	25	" ..	" ..	" ...	154	" .....
" 3..	9.30	25	" ..	" ...	"	154	" .....
" 3..	9.30	25	" ..	" ...	"	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9 30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	"	" ...	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	" ...	" ...	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	" ..	" ...	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	" ..	"	"	154	" .....
" 3..	9.30	25	Expess ..	R. G. Duncan ...	John Ross	154	Milford.....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3	"	"	" ..	"	"	"	" .....
" 3	"	"	" ..	"	"	"	" .....
" 3	"	"	" ..	"	"	"	" .....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ended June 30, 1904 *Continued.*

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
John Palmer	Brakeman	Jumped from engine	Leg broken and otherwise injured.	
A. Delaney	Yardmaster	While uncoupling cars	Head injured	
Mrs. Morrison	Passenger	Train derailed	Shock to system.	
Miss Morrison	"	"	Hand and face injured.	
Mrs. Pyche	"	"	Spine and back injured.	
J. S. McDonald	"	"	Scalp wound, shoulder and back injured.	
W. L. Haldimand	"	"	Face cut and shoulder injured.	
Miss F. Bentley	"		Leg injured and eye bruised.	
Mrs. J. Glassey	"	"	Fatal	Accidental.
W. A. Campbell and wife	"	"	Slightly injured.	
S. Ridout	"	"	Back, arm and hip injured.	
J. E. Blair	Baggagemast'r	"	Cut about head, face and back injured.	
Wm. Hilchey	Passenger		Scalp wound, face cut, nose broken	
E. J. Hudd	"	"	Shoulder and ribs injured.	
W. K. Wickwire	"	"	Face bruised, hand and arm injured.	
F. W. Demille	"	"	Head cut	
M. B. Keith	"	"	Hurt in groin, back and leg.	
J. Redford	"	"	Head cut, back and arm bruised	
D. C. Crowley	Brakeman	"	Scalp wound and breast injured.	
C. Biswanger	Baggagemast'r	"	Back and right leg injured.	
R. G. Duncan	Conductor	"	Fatal	Accidental.
G. F. Bissett	Passenger	Train derailed	Scalp wound, hand and hip injured.	
H. R. Trotter	"	"	Face slightly cut.	
G. W. Marsh	"	"	Face cut, arm and leg injured	
Matti Aradpikkararinon.		"	Slightly injured.	
Mrs. A. B. Vance	Passenger	"	Head and back injured.	
Mrs. A. T. Vance	"	"	Face cut and eye injured.	
W. A. Olmstead	"	"	Slightly injured.	
D. D. Rutherford	"	"	Back injured	
P. Kelly	Brakeman	"	Face bruised and leg injured.	
Herbert Uttley	Passenger	"	Head cut and arm injured.	
F. A. Bustin	Express Agent	"	Leg broken	
Thos. Appleby	News Agent	"	Face and head injured.	
J. Simmonds	Porter	"	Slightly injured.	
M. Savatorie	Passenger	"	Head and back injured.	

4-5 EDWARD VII., A. 1905

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1904.							
Feb. 3..	9.30	25	Express..	R. G. Duncan ...	John Ross....	"	Milford.....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 3..	"	"	" ..	"	"	"	" .....
" 4..	15.45	20	" ..	Geo. C. Keys.....	H. McCaulay....	237	Hopewell.....
" 6..	12.15	.....	Pilot.....	J. A. Beaulieu....	G. Roberge.....	182	Gravel siding.. .....
" 8..	...	.....	.....	.....	.....	.....	St. Romuald.....
" 10..	7.00	89	Freight...	J. Mahoney.. ...	F. Gratton	26	Meadowville.....
" 15..	11.55	28	Mixed....	R. A. McDonald..	H. Stewart	13	2 miles east of Sylvester's
" 16..	8.00	.....	.....	.....	.....	....	½ mile west of St. Cyrille
" 26..	14.38	23	Express..	Geo. Johnston....	R. Mitchell.....	173	Aston Junction.....
" 26..	24.54	26	" ..	W. J. Dickson....	.....	....	Stewiacke.. .. ..
" 27..	17.40	33	" ..	W. A. Mitchell ..	Louis Dutil.. ..	98	St. Lambert.....
Mar. 1..	16.30	26	" ..	W. J. Dickson....	Theo. Wilkins....	238	Penobsquis.....
" 10..	8.45	.....	Special...	D. J. McDonald..	A. B. Purdy....	222	Pirate Harbour.....
" 11..	5.00	.....	" ..	A. A. McNeil.....	D. Matheson.....	177	Orangedale.....
" 11..	19.10	.....	" ..	J. E. Fleming ...	J. C. McKay.....	263	2 miles east of Ferrona.
" 12..	23.25	69	Express..	C. J. Rhodes	W. Lovett.....	56	Rockingham.....
" 21..	13.00	.....	Special...	A. Gauvreau.....	Emile Roy..	204	St. Hyacinthe .....
" 24..	9.15	...	Pilot.....	A. Arcand.. ...	Geo. Roberge.....	182	Fitch's Siding.....
April 1..	21.30	33	Express..	A. McLellan.. ..	R. Bulmer.....	235	Moncton yard .....
" 1..	6.57	33	" ..	E. McKenna.....	G. Topping.....	74	St. Fabien. . . ..
" 5..	9.30	7	" ..	J. H. Sproul.....	C. F. Whitney....	55	St. John. .....
" 5..	19.30	.....	Special...	R. Doyle.....	A. Robbins.....	142	Milford.....
" 8..	12.50	....	" ...	A. Philips	H. McDonald..	79	Rockingham. .....
" 10..	11.00	.....	" ...	W. A. Warman...	D. Cool,....	.....	5 mls. west Berry's Mills
" 15..	7.45	152	Express..	A. Bouchard.....	Geo. Fendlay. ...	198	Montreal.. ....
" 16..	8.50	152	" ..	J. Bouthilette	G. Goddard.... ..	197	St. Madeline..... ....
" 18..	16.25	....	Shunter..	.....	John Hessian.....	95	Richmond.... .....
" 28..	2.15	....	" ..	R. Redmond.....	C. Coleman. .	190	" ....
" 29..	21.15	75	Freight...	A. Dumas..	N. Henry...	249	Chaudiere Junction....
" 30..	20.00	.. ..	Special...	M. McGillivray...	J. H. Shaw	218	New Glasgow.... ..
" 30..	20.45	.....	" ...	P. Dumas	F. Berube	269	St. Fabien.....
May 1..	5.25	...	" ...	Geo. Armstrong..	H Cameron.....	234	Sussex.....
" 1..	7.00	40	Freight...	Jas. Swetman	W. F. Smallwood.	298	Herbert's Siding... ...
" 2..	18.05	24	" ..	L. Hicks..... .	W. Gross.	284	Thomson..... ....
" 3..	15.15	.....	Special...	Geo. Armstrong...	L. Bradshaw.....	266	Springhill Junction ...
" 7..	6.15	..	" ..	J. S. Nickerson...	H. Cameron.....	119	Palmer's Pond. ....
" 9..	12.20	. .	" ...	D. J. McDonald..	Harry Thompson..	221	New Glasgow..... .. .
" 28..	21.30	40	Freight...	J. C. Ayer..	J. Williamson	298	Jacquet River.....
June 1..	5.55	75	" ..	V. Camuel.. ...	A. Matthews.....	....	St. Octave.... . .....
" 4..	5.00	.....	Special...	G. A. McKay....	A. Henderson.....	221	New Glasgow..... .
" 5..	17.30	....	" ...	A. Bonneau.....	F. Goddard..	207	1 mile west of St. Bazile.
" 10 .	21.00	.. .	Shunter..	.....	C. Skinner..	189	Richmond yard.....
" 17..	13.15	57	Freight...	Thos. Guinan.....	T. W. Hennessy..	275	1 mile west of Richmond
" 23.	10.00	. .	Shunter	.....	Geo. Spear	105	St. John yard.....
" 27..	14.15	....	Special...	R. H. Wilkins....	H. McDonald.....	210	Grand Narrows.....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ended June 30, 1904—*Continued.*

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
G. Papaluce	Passenger	Train derailed	Face and hand slightly injured	
G. Catalano	"	"	Slightly injured.	
P. Aditka	"	"	Chest and head injured.	
Matti Aroid	"	"	Slightly injured.	
G. Sisti	"	"	Head cut	
G. Marensi	"	"	Head injured	
Robt. Williams	Brakeman	While tightening steam coupling	Thumb crushed.	
Odilon Filion	"	While shunting	Hand injured	
F. White	"	While coupling cars	Hand bruised	
S. L. Briggs	"	Fell from train	Fatal	Accidental.
Jas. McDonald	Passenger	Jumped from train while in motion.	"	That death resulted from pneumonia.
Jos. Fortier	Neither	Found dead on track	"	Accidental.
Z. Martel	"	Train struck team while crossing track.	Hip injured	
B. Anthony	Passenger	Fell from train	Slightly injured.	
G. McDonald	Brakeman	While in act of getting on train	Head cut	
Geo. Brown	Fireman	While taking side rod off engine.	Thumb cut	
W. Leithead	Brakeman	Slipped from top of box car	Ankle injured	
John A. McLean	Neither	Found on track	Fatal	Accidental.
Jos. Solon	"	"	"	"
C. Steele	Brakeman	Fell from car	Ankle injured	
A. Ganvreau	Conductor	"	Feet and hip injured.	
F. Nolin	Brakeman	While shunting	Thigh crushed; died April 1, 1904.	No inquest.
W. F. Daley	Neither	Fell while getting off train in motion.	Fatal	Accidental.
Rev. M. Audit	"	"	Leg broken	
Bernard Callaghan	"	While walking on track, struck by engine.	Fatal	"
Roland Ross	"	While walking on track, struck by train.	"	"
F. Boomer	Brakeman	While uncoupling cars	Finger injured	
A. Laviolette	"	Fell between cars	Fatal	"
Vital Magrau	Neither	Struck by train	Face bruised	
A. Maconrelle	Passenger	Jumped off train in motion	Face and hands scratched.	
H. Osbrune	Shunter	While coupling cars	Finger crushed	
Geo. McDonald	Switchman	Struck by cars	Fatal	No inquest.
Jos. Lemieux	Brakeman	While coupling cars	Arm injured	
A. Costa	"	Walked over end of box car	Leg injured	
Philippe Boulet	Fireman	While placing engine at water tank.	"	
Titus Eagles	"	While cleaning fire box	Finger injured	
John Stephenson	Brakeman	While shunting	"	
Roland H. Clark	"	Fell while shunting	Chin injured	
J. D. Elliott	"	While standing on steps of engine came in contact with van on siding.	Head cut	
J. E. Moore	"	While coupling cars	Hand injured	
H. Sullivan	Neither	While walking on track, struck by train.	Foot cut off	
Alex. Burns	Passenger	Fell off train in motion	Hand cut off	
Antoine Ouellet	Neither	While crossing track, struck by train.	Fatal	Accidental.
B. Dempsey	Brakeman	While riding on side of car, struck by switch.	Arm injured	
W. Walling	Fireman	Fell from engine	Badly injured	
W. McNeil	Shunter	While coupling cars	Hand injured	
Jas. Jamp	Neither	Struck by train while crossing track.	Head injured	
Beverley Hines	"	Fell while getting on car	Two toes cut off.	
A. H. McDonald	Brakeman	While shunting	Finger injured	

WINDSOR BRANCH RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
MONCTON, N.B., September 15, 1904.

SIR,—I have the honour to submit the following statements showing the results of the working of the Windsor Branch Railway for the year ended June 30, 1904.

No. 1.—Revenue Account.

No. 2.—Maintenance of way and works.

No. 3.—General balance.

No. 4.—Statements of earnings.

I also send you the report of the engineer of maintenance on the condition of the permanent ways and works.

This line, 32 miles in length, was operated during the year by the Dominion Atlantic Railway Company on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings, the balance, one-third, being paid over to the government, the latter maintaining the line.

The gross earnings show a considerable increase, as follows:—

Earnings, 1903-04	$53,634 05
Earnings, 1902-03	42,560 81
Increase	$11,073 24

The increase was in freight traffic. There was a slight decrease in passenger traffic.

The net earnings for the year were $29,352.96.

The permanent way and works received necessary repairs and are in good order.

I have the honour to be, sir,

Your obedient servant,

D. POTTINGER,
General Manager, Government Railways.

Collingwood Schreiber, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department Railways and Canals,
Ottawa, Ont.

No. 1.—WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT, year ended June 30, 1904.

Previous Year.	Expenditure.	Year ended June 30, 1904.	Previous Year.	Earnings.	Year ended June 30, 1904.
$ cts.		$ cts.	$ cts.		$ cts.
17,843 19	Main. of way and works ..	24,281 09	14,747 39	Passenger traffic	14,527 58
24,717 62	Balance	29,352 96	26,661 58	Freight traffic....	37,950 95
			1,151 84	Mails.....	1,155 52
42,560 81		53,634 05	42,560 81		53,634 05

T. WILLIAMS,
Chief Acct. and Treasurer

E. & O. E.,
MONCTON, N.B., June 30, 1904.

No. 2.—WINDSOR BRANCH RAILWAY.

MAINTENANCE of Way and Works, year ended June 30, 1904.

Previous Year.		Year ended June 30, 1904.
$ cts.		$ cts.
11,427 84	....Repairs of track	10,117 96
372 96	... Rails and fastenings.....	5,050 13
1,972 67	...Ties.....	2,724 27
584 36	... Bridges.....	1,587 51
22 14	....Signals.....	46 80
544 66	....Culverts, cattle guards, &c	1,999 03
617 80	....Wharf at Windsor.....	7 50
477 36	....Buildings and platforms.....	604 65
14 63	....Hand-cars and trollies	7 10
337 54	....Removing snow and ice.....	541 23
170 20	....Tools and repairs of same.....	191 90
617 65	...Fencing.....	216 29
637 11	....Accountant's office and expenses.....	1,078 69
46 27	....Miscellaneous	108 03
17,843 19		24,281 09

T. WILLIAMS.
Chief Acct. and Treasurer.

E. & O. E.,
MONCTON, N.B., June 30, 1904.

No. 3.—WINDSOR BRANCH RAILWAY.

DR. GENERAL BALANCE, year ended June 30, 1904. CR.

1904.		$ cts.	1904.		$ cts.
June 30.	To Stores	5,898 64	June 30.	By Dominion account.	6,051 85
	Old rails	45 01			
	D. A. Ry.	108 20			
		6,051 85			6,051 85

T. WILLIAMS,
Chief Acct. and Treasurer.

E. & O. E.,
MONCTON, N.B., June 30, 1904.

No. 4.—WINDSOR BRANCH RAILWAY.

MONTHLY Statement of Receipts One-third Earnings.

Month.	Passenger Traffic.	Freight Traffic.	Mails.	Totals.
	$ cts.	$ cts.	$ cts.	$ cts.
July, 1903	1,672 84	2,055 09	96 91	3,824 84
August "	1,912 90	2,152 00	96 91	4,161 81
September "	2,564 80	4,337 16	96 90	6,998 86
October "	1,427 89	5,521 69	96 91	7,046 49
November "	852 56	5,007 20	96 90	5,956 66
December "	1,015 65	3,032 79	96 91	4,145 35
January, 1904	678 11	2,861 42	95 68	3,635 21
February "	643 74	3,000 33	95 68	3,739 75
March "	743 36	3,565 74	95 68	4,404 78
April "	785 57	2,489 01	95 68	3,370 26
May "	927 61	2,038 93	95 68	3,062 22
June "	1,302 55	1,889 59	95 68	3,287 82
	14,527 58	37,950 95	1,155 52	53,634 05

T. WILLIAMS,
Chief Acct. and Treasurer.

E. & O. E.,
MONCTON, N.B., June 30, 1904.

WINDSOR BRANCH RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,
MONCTON, N.B., September 10, 1904.

SIR,—I have the honour to submit herewith the report of the maintenance of the Windsor Branch for the year ending June 30, 1904.

TRACK.

During the past year 5,357 feet of 4-inch and 2,527 feet of 4½-inch rails were taken up, and 5,117 feet of 4-inch, 1,617 feet of 4¼-inch, and 1,150 feet of 4½-inch rails were cut and relaid.

TIES.

Ten thousand two hundred and ten ordinary ties, and three sets of switch ties were renewed during the year.

BALLASTING.

Two hundred cubic yards of ballast were distributed and put under during the year.

SEMAPHORES AND SWITCHES.

During the year necessary repairs were made to existing switches and semaphores throughout the line where required.

FENCING.

Forty rods of new page wire fence were built during the year, and repairs made to existing fences where necessary.

BUILDINGS AND PLATFORMS.

Repairs.

Windsor, passenger elevators.
Windsor, station.
Windsor, track scales.
Windsor, freight shed.
Hartville, freight platform.
Newport, freight shed.
Newport, station.
Beaver Bank, freight platform.

New Work.

Beaver Bank, cattle pen.
Ellershouse, cattle pen.
Windsor, hardwood floor in freight offices.

MASONRY.

Repairs.

Beaver Bank station, cellar wall.

WHARFS AND TRESTLES.

Repairs.

Windsor, wharf.
Ellershouse, cribwork.

BRIDGES AND CULVERTS.

Repairs.

Beaver Bank, culvert.

New Work.

Stillwater, culvert, wooden.
Garlands, culvert, wooden.

MASONRY.

Repairs.

Three and one-half miles Windsor station, Daley's bridge.
One-half mile east Beaver Bank station, small bridge.
East Beaver Bank station, small bridge.
One-half mile west Beaver Bank station, Feely's culvert.
Two miles west Beaver Bank station, Fenerty's culvert.
One-quarter mile east South Uniacke station, culvert.
One and one-half miles west Newport, Daley's bridge.
Two miles east Windsor, Wilkin's bridge.
Garland's Crossing, culverts.
Three miles east Windsor, Seivright's culvert.
Three Mile Plains, small bridge.
Ponkook Crossing, culvert.
Three miles east Windsor station, Sharpe's bridge.

General.

Repairs were made to cattle-guards and crossings where required.
New glass put in and necessary glazing done to windows where needed.

I have the honour to be, sir,

Your obedient servant,

T. C. BURPEE,
Engineer of Maintenance of Ways and Works.

J. E. PRICE, Esq.,
General Superintendent,
Moncton, N.B.

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
MONCTON, N.B., September 19, 1904.

SIR,—I have the honour to submit the following reports on the working of the Prince Edward Island Railway for the fiscal year ended June 30, 1904.

I inclose the report of the superintendent, including statements of the various accounts; also the report of the chief engineer on the works charged to capital account.

The mileage of the railway was the same as last year—209 miles.

The expenditure on capital account during the year was $698,877.47. This makes the total cost of the railway on June 30, 1904, $6,128,116.80.

Of the expenditure during the year $226,248.22 was on account of the Murray Harbour branch, and $418,982.76 for the Hillsborough bridge, which is a part of that branch.

The results of operating the railway are much less favourable than last year, the working expenses being $335,695.44, and the gross earnings $234,390.03, a loss of $101,305.41 as compared with the previous year, when the loss was $41,923.58.

The gross earnings increased $16,675.79 over last year, $7,141.37 in passenger traffic, $7,541.87 in freight traffic, and $1,992.55 in mail and sundries.

There was an increase of $76,057.62 in the working expenses compared with last year.

The permanent way and works and the roling stock are in a state of efficiency.

I have the honour to be, sir,

Your obedient servant,

D. POTTINGER,
General Manager, Government Railways.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Railways and Canals,
Ottawa, Ont.

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,
CHARLOTTETOWN, P.E.I., Sept. 14, 1904.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway for the fiscal year ended June 30, 1904.

I also inclose the report of the Mechanical Superintendent, and the following statements prepared by the accountant and auditor and the mechanical accountant and storekeeper :—

No. 1. Capital account.
2. Revenue account.
3. Locomotive power (abstract No. 1).
4. Car expenses (abstract No. 2).
5. Maintenance of ways and works (abstract No. 3).
6. Station expenses (abstract No. 4).
7. General charges (abstract No. 5).
8. General store account.
9. General balance.
10. Comparative statement of averages.

A. Monthly statement of the cost of locomotive power.
B. Statement of performance and consumption of locomotives.
C. Monthly statement of car mileage.
D. Statement showing the number of locomotives, cars, snow ploughs and flangers.
E. Comparative statement of the expenses of the mechanical department.

The mileage of the railway in operation is the same as last year, 209 miles.

CAPITAL ACCOUNT.

The total expenditure to June 30, 1903, was	$5,429,239 33
The additions during the year were as follows :—	
Station at Alberton	24 00
Baggage room at Souris	399 82
Station at Fredericton	619 76
Station and land at Albany	808 74
Station and additional accommodation at Kinkora	949 45
Addition to freight shed and grading Hunter river	997 75
Stations at Northam and Richmond	1,338 84
Survey to Montague Bridge	1,942 54
Coal shed and widening wharf at Summerside	1,997 86
Increased accommodation at Charlottetown	3,291 69
Straightening line, Blue Shank	3,995 93
Improvement to water service	4,804 07
Straightening line at Curtis creek	10,895 74
Applying air brakes and signals	21,580 30
Murray Harbour branch	226,248 22
Hillsborough Bridge	418,982 76
Making the total cost on June 30, 1904	$6,128,116 80

Alberton station.—Tenders were called for a new building, and a contract let for the work to be done during the current year.

Baggage room, Souris.—A new building was erected adjoining the station building.

Station at Fredericton.—A new standard caretaker's building with a waiting-room and a room for freight was provided on the location of the old building; the latter was only a shelter.

Station at Albany.—Additional land was purchased, and a standard caretaker's station was erected with separate rooms for freight and passengers.

Station at Kinkora.—A standard caretaker's station was erected, with accommodation for both freight and passengers, and the grounds about the station were graded as required.

At Hunter River.—The freight shed was enlarged, and the station grounds were graded.

At Northam and Richmond.—Caretakers' stations were built, providing accommodation for both passengers and freight.

Survey at Montague bridge.—See the chief engineer's report.

Coal shed at Summerside.—An addition to the present building was provided, sufficient to store about seven hundred tons of coal, and the wharf was widened for the building.

At Charlottetown.—A fill has been commenced on the property purchased form the provincial government, and sidings have been erected thereon to provide needed increased accommodation.

Straightening line at Blue Shank.—This work was carried over from last year, and is now completed and in operation.

Water service.—Overhead tanks for watering locomotives, and for carrying water into stations, are being provided where needed and where practicable. The work is continued into the current year.

Straightening line at Curtis Creek.—This work consists of grading 4,000 feet, and of building a stone culvert to take the place of an iron bridge. The improvement consists of saving 3,090 feet of track, of cutting out two 9 degree curves, one 6 degree and one 5 degree. The new line will be practically straight. The works extends into the current year for completion.

Air brakes and signals.—The latest improved Westinghouse air brakes and signals are being applied to all the rolling stock.

Murray Harbour Branch.—The line has been extended to Murray Harbour, the rails are all laid except one mile, and the ballasting nearly all done.

Hillsborough bridge.—The work of erecting the iron spans and of making the earth approaches is progressing favourably. Details are furnished by the chief engineer of this, as well as the Murray Harbour Branch.

REVENUE ACCOUNT.

The earnings continued to increase. Trade in general throughout the province was good, and the crops above the average. The crops for the current year are below the average and a decline in revenue as a result is anticipated.

The gross earnings and working expenses for the year compare as follows :—

Gross earnings	$234,390 03
Working expenses	335,695 44
Difference	$101,305 41

The gross earnings compare with the previous year as follows :—

In 1902-1903	$217,714 24
1903-1904	234,390 03
Increase	$ 16,675 79

The earnings from passenger traffic compare as follows :—

In 1902-1903	$ 95,237 12
1903-1904	102,378 49
Increase	$ 7,141 37

The earnings from freight traffic compare as follaws :—

In 1902-1903	$106,519 72
1903-1904	114,061 59
Increase	$ 7,541 87

The earnings from mails and sundries compare as follows :—

In 1902-1903	$ 15,957 40
1903-1904	17,949 95
Increase	1,992 55

The number of passengers carried compare as follows :—

In 1902-1903	205,265
In 1903-1904	224,567
Increased	19,302

The weight of freight carried compares as follows :—

	Tons.
In 1902	80,582
In 1903-1904	86,286
Increase	5,704

WORKING EXPENSES.

The working expenses compare with the previous year as follows :—

In 1902-1903	$259,637 82
In 1903-1904	335,695 44
Increase	$ 76,057 62

This increase is principally the result of two large locomotives purchased and charged to revenue $19,600, removing snow and ice in consequence of a severe winter, $7,300, increased consumption of fuel $16,000, increase in wages during the year $24,100, and an increase in the renewal of ties to the extent of $12,000.

The averages compare with the previous year as follows :—

Per mile run by engines.

	Cents.
In 1902-1903	66·58
In 1903-1904	82·68

Per mile run by trains.

In 1902-1903	89·14
In 1903-1904	108·01

Expenditure per mile of railway.

In 1902-1903	$1,242 29
In 1903-1904	1,606 09

TRACK.

Sixty thousand railway ties, 30 sets of switch ties, and 40 switch headblocks with frames were renewed, and 1,700 cull ties were used in yards and sidings. Three and one-half miles of 56 lb. steel rails were laid to replace 50 lb. steel rails, and 140 feet of 56 lb. steel rails were laid in scale track siding at Summerside. One steel frog and 144 feet of 56 lb. steel rails were laid in track at Cardigan ballast pit. One thousand, four hundred and forty feet 50 lb. steel rails were relaid in yard at Georgetown. The curves on three sections were recentred with transit, and where possible easements were put in at the ends. During the year repairs were made to ten hand cars ; eight new lorry tops were built ; 6 new track levels and 4 new straight edges made.

SIDINGS.

At Smallman's Mill, near Conway, a newsiding of 150 feet was put in.
At Kensington a siding, 525 feet long, was rebuilt.
At Kelvin, siding 300 feet long was rebuilt.
At Kinkora, siding was extended 275 feet.
At Albany, siding was extended 342 feet.
At Morell, siding was extended 120 feet.

FENCING.

There were 74,347 feet of page wire erected on cedar posts ; 3,365 feet barbed and web wire fence, and 6,443 feet snow fence rebuilt, and temporary snow fences erected during the winter where most needed.

All other fences received necessary repairs.

One hundred farm gates were renewed.

BALLASTING.

1,237 cars ballast were distributed in places where most needed, and 237 cars clay used in grading station yards and widening embankments.

BRIDGES AND CULVERTS.

At Tignish, Pig Brook bridge had top painted and ten hard pine ties renewed.

At Bloomfield, Trout Brook bridge had top painted, and 10 hard pine ties renewed.

At Alberton, Huntley river bridge had top painted.

At Kelvin, top of bridge painted, and 20 hard pine ties put in.

Johnson's bridge, near Kelvin, had top painted.

Near Cardigan, bridge had new abutments built, and 4 hard pine ties renewed.

All bridges that required repairs were attended to.

Near Cardigan, one iron pipe culvert, 60 feet long, and 2 feet in diameter was put in to replace old culvert which was worn out.

Twenty-eight wooden culverts were rebuilt with cedar.

Eighteen culverts were repaired by the use of 25 barrels of cement, and six cars hard stone.

Twenty-six cattle-guards were rebuilt.

WHARFS AND BREASTWORKS.

At Summerside, the following material was used in making a temporary slip for ss 'Stanley': 100 cubic feet 12-inch x 12-inch hemlock timber, 600 B.M. spruce deals, and one keg of nails.

At Charlottetown, the following material was used in repairing the wharf:—2,850 cubic feet 12-inch x 12-inch hemlock timber, 500 butt bolts 20 inches long, 8 cars clay, and 2 cars brush. Two hundred cubic feet 12-inch x 12-inch hemlock timber, and 30 butt bolts 20 inches long were used for breastworks.

BUILDINGS AND PLATFORMS.

Tignish.—An addition of 20 feet was built to coal lift. A new fence was erected in front of agent's dwelling. Station platform received necessary repairs.

Alberton.—Agent's dwelling was painted, and received necessary repairs.

Ellesslie.—Roof of station was reshingled, and inside of station sheathed. New sills were placed under building, and necessary repairs made.

Northam.—A new caretaker's station, 40 feet by 20 feet, was built. Material used for foundation: 5 pieces 12-inch by 12-inch hemlock, 20 feet long.

Richmond.—A new caretaker's station, 40 feet by 20 feet, was built. Material used in foundation: five pieces hemlock 12 inches by 12 inches, 20 feet long. A great deal of grading had to be done at both Northam and Richmond.

Wellington.—A new water closet was furnished.

Miscouche.—Roof of station was reshingled, and a new water closet furnished.

Summerside.—The following material was used in foundation for extension to coal shed: 48 creosoted piles, 24 feet long, 225 cubic feet 12-inch by 12-inch hard pine, 500 cubic feet 12-inch by 12-inch hemlock timber, 13 hardwood piles 30 feet long, 500 B.M. feet hemlock plank, 200 butt bolts 22 inches long, 60 screw bolts 15 inches long, and 32 iron plates 3 feet long.

Kensington.—Agent's dwelling received necessary repairs, and a new cattle pen was erected.

Barbara West.—Flag station was rebuilt, and a new platform built.

Kelvin.—Station was moved from old track to new one and rebuilt.

Emerald.—Agent's dwelling received necessary repairs.

Kinkora.—New caretaker's station, 40 feet by 20 feet, was built, and six pieces 12-inch by 12-inch cedar, 20 feet long, were used in foundation.

Albany.—A new caretaker's station, 40 feet by 20 feet, was built. Material used in foundation of same: 6 pieces, 12-inch by 12-inch cedar, 20 feet long. Considerable grading had to be done at both Kinkora and Albany.

Cape Traverse.—Roof and front of station was reshingled, and necessary repairs made.

Fredericton.—A new caretaker's station, 40 feet by 20 feet, was built. Material used in foundation of same: 6 pieces cedar 12 inches by 12 inches, 20 feet long.

Hunter River.—An extension of 35 feet was built to freight house, and building raised ten inches. Station was painted. Agent's dwelling received necessary repairs.

North Wiltshire.—A new gravel roof was put on freight house, and necessary repairs made to station.

Charlottetown.—The following material was used in making repairs to coal shed: 425 cubic feet 12-inch by 12-inch hemlock, 20 pieces 10-inch by 12-inch cedar, 12 feet long, 1,500 B.M. feet hemlock plank, two kegs nails, 25 pounds nails, 20 screw bolts 15 inches long, and 8 iron plates 3 feet long. In making repairs to station platform, 1,500 B.M. feet hemlock plank, and one keg nails were used.

Morell.—New doors and windows were placed in baggage room.

Souris.—A new office was built in warehouse on wharf. Two pits were rebuilt in engine house. A new baggage room, 40 feet by 20 feet, was built on foundation of concrete piers. Agent's office was sheathed. Second-hand turntable was placed in engine house to replace wooden one, and roof of engine house reshingled.

Georgetown.—New pit was built. Roof of engine house was reshingled, and necessary repairs made to freight house and office on wharf.

STORES.

The value of stores purchased, including rails, was	$213,181 13
The value of stores used was	252,737 23
The value of old material sold was	25,327 83

The value of stores on hand at the end of the year was:

Ordinary stores	$27,357 97
Fuel	20,020 97
Steel rails and fastenings	12,732 63
Old material for sale	39,698 20
	$99,809 77

GENERAL.

The rolling stock, roadbed and buildings have all received necessary attention, and have been maintained in a proper state of efficiency.

I inclose a return of minor casualties which occurred during the year.

I have the honour to be, sir,

Your obedient servant,

G. A. SHARP,
Superintendent.

D. Pottinger, Esq., C.I.S.O.,
General Manager, Canadian Government Railways,
Moncton, N.B.

PRINCE EDWARD ISLAND RAILWAY.

Accidents during the year ended June 30, 1904.

Cause of Accident.	Passengers.		Employees.		Others.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1. Fell from cars or engine				2				2
2. Jumping on or off trains or engines when in motion								
3. At work on or near the track making up trains								
4. Putting arms or heads out of windows								
5. Coupling cars				2				2
6. Collision, or by trains thrown from track								
7. Struck by engines or cars on highway crossing								
8. Walking, standing, lying, sitting or being on track								
9. Explosions								
10. Striking bridges								
11. Other causes				13				13
Total				17				17

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

Capital Account.

Dr.				Cr.			
1903.			$ cts.	1903			$ cts.
June 30.	To cost of road and equipment to date		5,429,239 33	June 30.	By Dominion of Canada		5,429,239 33
1904.				1904.			
June 30.	To expenditure, year ended June 30, as follows:			June 30.	By Dominion of Canada		698,877 47
	Station at Alberton	$ 24 00					
	Baggage room at Souris	399 82					
	Station at Fredericton	619 76					
	Station and land at Albany	808 74					
	Additional accommodation, Kinkora	949 45					
	Increased accommodation, Hunter River	997 75					
	Stations at Northam and Richmond	1,338 84					
	Survey to Montague bridge	1,942 54					
	Coal shed and widening wharf, Summerside	1,997 86					
	Increased accommodation, Charlottetown	3,291 69					
	Straightening line, Blueshank	3,995 93					
	Improvements in water service	4,804 07					
	Straightening line, Curtis Creek	10,895 74					
	Westinghouse air brakes and signals	21,580 30					
	Murray harbour branch	226,248 22					
	Hillsborough bridge	418,982 76					
			698,877 47				
			6,128,116 80				6,128,116 80

Charlottetown, P.E.I., June 30, 1904.

W. T. HUGGAN,
Accountant and Auditor.

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

DR. REVENUE ACCOUNT for Year ended June 30, 1904. CR.

Previous Year.	Expenditure.	Year ended June 30, 1904.	Previous Year.	Receipts.	Year ended June 30, 1904.
$ cts.		$ cts.	$ cts.		$ cts.
73,052 05	Locomotive power, per Abstract No. 1	115,474 46	95,237 12	Passenger traffic	102,378 49
			106,519 72	Freight traffic	114,061 59
49,948 05	Car expenses, per Abstract No. 2	54,345 93	15,957 40	Mails and sundries	17,949 95
81,352 13	Maintenance of ways and works, per Abstract No. 3	103,826 40	217,714 24	Total receipts	234,390 03
			41,923 58	Balance	101,305 41
42,304 07	Station expenses, per Abstract No. 4	46,455 93			
12,981 52	General charges, per Abstract No. 5	15,592 72			
259,637 82	Totals	335,695 44	259,637 82	Totals	335,695 44

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1904.

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

LOCOMOTIVE POWER.—(Abstract No. 1.)

Previous Year.	Details.	Year ended June 30, 1904.
$ cts.		$ cts.
2,406 38	Mechanical superintendent's salary, clerks, office and travelling expenses	2,447 04
24,033 50	Wages of drivers, firemen and cleaners	30,951 53
23,082 65	Fuel	39,067 03
1,913 55	Oil, tallow, waste and small stores	2,080 29
18,486 21	Repairs to engines, tenders and engine tools	37,843 48
951 16	Water, including pump and tank repairs	554 62
2,178 60	Miscellaneous	2,530 47
73,052 05	Totals	115,474 46

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1904.

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

Car Expenses.—(Abstract No. 2.)

Previous Year.	Details.	Year ended June 30, 1904.
$ cts.		$ cts.
6,354 23	Repairs to passenger cars	6,156 88
5,822 78	" postal, express and baggage cars	1,469 61
9,858 09	" freiglit cars and vans	7,808 32
611 90	" snow ploughs and flangers	1,540 00
21,743 64	Wages of conductors, train baggage masters and brakemen	30,738 30
594 79	Oil and waste for packing	660 90
3,548 04	Small stores and fuel	4,432 35
1,414 58	Miscellaneous	1,539 57
49,948 05	Totals	54,345 93

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1904.

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

Maintenance of Way and Works—(Abstract No. 3).

Previous Year.	Details.	Year ended June 30, 1904.
$ cts.		$ cts.
334 91	Engineer's salary, clerks, office and travelling expenses	331 42
45,095 35	Wages in repairing roadway, fences and semaphores	49,047 56
5,070 20	Rails, chains and spikes	2,624 10
12,200 15	Ties	25,083 29
3,378 92	Timber and lumber for repairs to bridges, cattle guards, &c.	4,834 88
2,851 39	Repairs to wharfs	2,618 43
6,285 96	Repairs to buildings and platforms	5,976 55
1,654 38	Repairs to tools	1,520 05
4,480 87	Clearing ice and snow	11,790 12
81,352 13	Totals	103,826 40

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1904.

No. 6.—PRINCE EDWARD ISLAND RAILWAY.

Station Expenses—(Abstract No. 4).

Previous Year.	Details.	Year ended June 30, 1904.
$ cts.		$ cts.
33,771 43	Salaries and wages of stationmasters, agents, clerks, telegraph operators, station baggagemasters, yardmasters, switchmen, watchmen and labourers..	37,461 34
8,532 64	Fuel, oil, light stationery and other incidental expenses	8,994 59
42,304 07	Totals	46,455 93

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1904.

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

General Charges—(Abstract No. 5).

Previous Year.	Details.	Year ended June 30, 1904.
$ cts,		$ cts.
6,774 85	Superintendent's and train despatchers' salaries, clerks, office and travelling expenses.	7,804 84
5,180 57	Accountant and auditors', paymasters' and cashiers' salaries, office and travelling expenses	5,558 51
296 90	Advertising.	377 40
337 55	Damages to men, animals and goods.	1,419 23
309 40	Telegraph expenses (not including pay to operators).	359 99
82 25	Miscellaneous	72 75
12,981 52	Totals	15,592 72

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1904.

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF GENERAL STORES ACCOUNT, year ended June 30, 1904.

1904.	DR.	$ cts.	$ cts.
June 30.	To Balance brought forward		107,999 15
1904.			
June 30.	Purchases during the year including rails	213,181 13	
	Charges from other departments	29,836 72	
	Pay rolls	1,530 00	
			244,547 85
			352,547 00
	CR.		
June 30.	By Issues during the year		252,737 23
	Balance.—Ordinary stores $ 26,905 47		
	Fuel 20,020 97		
	Rails and fastenings on hand 52,430 83		
	Old material serviceable 452 50		99,809 77

W. T. HUGGAN,
Accountant and Auditor

CHARLOTTETOWN, P.E.I., June 30, 1904.

No. 9.—PRINCE EDWARD ISLAND RAILWAY.

DR. GENERAL BALANCE. CR.

	$ cts.		$ cts.
General stores	99,809 77	Dominion account	8,917 50
Cash	8,189 48	Intercolonial Railway	105,712 59
Stations	2,152 59	John McDougall & Co.	718 75
Post Office Department	9,060 70	I. C. Coal Mining Co.	16,159 05
Militia Department	306 75	Through ticket ledger	509 54
Anglo-American Telegraph Company	46 43		
Judge Weatherbie	30 00		
Sidney Grey	30 00		
Railway Extension, Charlottetown	812 83		
Accident Insurance	1,825 42		
M. J. Haney	6,586 35		
W. Kitchen	2,738 04		
Rhodes, Currie & Co.	428 87		
	132,017 23		132,017 23

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1904.

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT of Averages for Years ended June 30, 1904 and 1903.

Details.	1904.	1903.
Mileage of railway open	209	209
Engine mileage	406,007	389,953
Train mileage	310,785	291,263
Car mileage	1,822,737	1,745,365
Receipts per engine mile.....Cents.	57·75	55·83
" mile of railway.....Dollars.	1,121.48	1,041.69
Percentage of passenger earnings to gross receipts	43·68	43·74
" freight " "	48·66	48·93
" other " "	7·66	7·33
Expenses per engine mile:—		
Drivers, firemen and cleaners' wages	7·63	6·16
Fuel	9·62	5·92
Oil, tallow, waste and small stores	·51	·49
Repairs to engines	9·32	4·74
Water and tank repairs	·14	·24
Miscellaneous	·62	·56
	27·84	18·11
Mechanical superintendent's salary, office and travelling expenses	6·60	·62
Total.....Cents.	28·44	18·73
Locomotive power, per engine mile	28·44	18·73
Car expenses	13·39	12·81
Maintenance of way and works, per engine mile	25·57	20·86
Station expenses	11·44	10·85
General charges	3·84	3·33
Total per engine mile.....Cents.	82·68	66·58
Locomotive power, per train mile	37·15	25·08
Car expenses	17·49	17·15
Maintenance of way and works	33·41	27·93
Station expenses	14·94	14·52
General charges	5·02	4·46
Total per train mile.....Cents.	108·01	89·14
Working expenses, per mile of railway.....Dollars.	1,606.09	1,242.29

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1904.

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE CHIEF ENGINEER,
MONCTON, N.B., September 13, 1904.

SIR,—I have the honour to submit the following report on capital account expenditures for the fiscal year ending June 30, 1904:—

MURRAY HARBOUR BRANCH.

The grading, structures, &c., between Mutch's Point and Murray river have been completed and all track laid and the line ballasted, with the exception of a short portion at Mutch's Point end. The contract has been let for the buildings and platforms, and the work is well under way. The portion of the line between Murray river and Murray harbour is being graded and the work is well advanced.

HILLSBOROUGH RIVER BRIDGE.

Superstructure.

North approach.—During the year 83 cribs have been placed along the toe of the slope, making the total number 151. There remain about 25 more to be built and placed to complete this work. A steam shovel has arrived, and will in a few days be placed at work in a borrow pit situated on the main line about 1½ miles from Charlottetown. The material will be transported by locomotives and cars to complete the embankment. A trestle has been built by the contractor extending from the shore to the north abutment for the purpose of doing this work.

Abutment A.—The foundation of this abutment was prepared by the pneumatic process. After the site had been bored and blasted, the material down to an elevation of 54·5 was removed by the dredge. The caisson was towed to the site September 12, 1903, and the timber work completed there. It was finally placed in its position on October 12. Concreting was begun September 23, and completed on October 17. Air was put on November 6, and the excavation completed on the 16th, when filling the pneumatic chamber with concrete began. This was completed on the 19th. The shoe finally resting at an elevation of 42·92. Stone masonry was begun November 22, and completed on December 9, the space outside the caisson due to dredging has been partly filled with mud. The completing of the mud protection, the riprapping and some pointing remain to be done.

Pier 3.—The stone masonry on this pier was completed July 14.

Pier 5.—Stone masonry was completed on this pier July 18.

Pier 6.—The foundation for this pier was prepared by the pneumatic process. The site was first bored and blasted and the material removed by the dredge to an elevation of 14·00. The caisson was towed to the site on August 24 and grounded in position on August 29. The concrete in the body of the pier was completed on September 10. Air was put on September 18, and the pneumatic excavation completed October 6, the shoe resting at an elevation of 7·37. The concrete in the air chamber was completed on October 11. The stone masonry pier was begun October 15, and completed on the 28th. The space outside the caisson in consequence of the dredging has been filled with mud to the original bed of the river. The riprapping yet remains to be done.

Pier 7.—The foundation for this pier was prepared by the pneumatic process. The site being bored and blasted, the material was removed by dredging down to an elevation of 7'20. The caisson was moved to its site July 31, and was grounded and placed in position August 6. The concrete in the body of the pier was completed on August 19. Air was put on October 12, and the excavation completed October 28. Filling the air chamber with concrete began October 29 and was completed on November 4. Stone masonry was begun on November 5 and completed November 14, when a portion of the riprapping was done. The space around the caisson due to the dredging has been filled with mud to the original bottom. There remains the riprapping to complete.

Pier 8.—Stone masonry on this pier was completed July 18. Nearly all the riprapping required was done September 11 and 12.

Pier 11.—Nothing was done to this pier during the year; it was previously completed to the top of the cutwater. The stone masonry and the riprapping will be completed in a short time.

Abutment B.—The caisson was finally placed in its position July 3 and the stone masonry completed August 22. It has been protected with mud and the riprap completed.

South approach.—Nothing done.

General.—There remains yet some mud protection and riprapping of slack spots around nearly all the piers to be done. During the year 575,948 feet B.M. of timber and 204,964 pounds of iron have been placed in the work. 2,384 cubic yards of material have been excavated in pneumatic foundations. 8,412 cubic yards of concrete and 2,279 cubic yards of stone masonry were laid. 71 cribs have been built, 7,130 cubic yards of mud placed around pile foundations for protection, 10,575 cubic yards of riprap were placed around the piers and in the cribs. The contractor stopped work on December 15, 1903, and recommenced on May 18, 1904.

Superstructure.

A contract has been let for transporting and erecting the superstructure and putting on the floor and sidewalks of the bridge. Part of the metal work of the spans has been shipped from the Miramichi bridges and is partly delivered at Charlottetown. Part of the additional parts for floor and sidewalk brackets have also been shipped from the maker's works at Montreal, and the erecting stages and storing wharf is built at Charlottetown. A quantity of plant, scows, &c., are on the ground. The new swing span has been manufactured, but is not yet in place.

Connection between the Main Line of the P.E.I. Railway and the Hillsborough Bridge.

Grading was begun on June 1, and is now in progress. The embankments are being made up from materials borrowed near Curtis creek on the main line and transported by locomotive and cars. About 3,000 yards have been placed in the work, and all the track amounting to 0·44 miles laid.

To straighten line at Curtis' Creek.

The work of grading and building the structures on this division has been let by contract, and the grading is partly done, and a quantity of materials for the work delivered on the ground.

I have the honour to be, sir,
Your obedient servant.

D. POTTINGER, Esq.,
General Manager, Government Railways,
Moncton, N.B.

WM. B. MACKENZIE,
Chief Engineer.

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE MECHANICAL SUPERINTENDENT,
CHARLOTTETOWN, P.E.I., September 1, 1904.

G. A. SHARP, Esq.,
Superintendent.

DEAR SIR,—I beg to submit for your information the following statement of the operation of the Mechanical department for the year ended Jun. 30, 1904.

The following is a summary of the principal work performed :—

LOCOMOTIVES

Four locomotives were purchased from the Canadian Locomotive Company, Kingston, Ontario, which are giving good satisfaction, and are a great addition to our rolling stock.

Eight engines received heavy repairs, and 12 engines specific repairs. Three engines on the Murray harbour branch received specific repairs.

One engine received new fire box, crossheads, motion, driving and truck boxes, and had all running gear renewed. Ten locomotive smoke stacks were built. Two thousand tubes were pieced and put into locomotives. Four tenders, 12 injectors, and 6 monitors were largely rebuilt. Four pop valves, 6 whistles, and 130 sets of steam packing were made. Four hundred and fifty wheels were bored and pressed on axles. One hundred and fifty standard axles, 20 sets of driving wheels, and 12 sets of engine truck wheels were turned. Sixty sets of new truck boxes were fitted up, and their spring covers adjusted. 5,270 lbs. of nuts were tapped. 115,976 lbs. of iron, and 1,800 lbs. of steel were forged. One hundred and sixty driving and truck springs were repaired, and 50 new driving and truck springs made. The Westinghouse air brake was applied to 14 passenger cars and two locomotives.

CAR DEPARTMENT

Two first-class cars, 2 second-class cars, 1 conductor's van, 1 snow plough, 2 refrigerator cars, 4 stock cars, 7 box cars, and 2 coal cars were built and charged to Murray harbour branch capital account. Three flanger cars, 1 platform car, 34 box cars, 15 flat cars, and 3 snow ploughs received heavy repairs. Six first-class cars, 2 second-class cars, 20 box cars, 15 flat cars, 2 snow ploughs, and 2 flangers received light repairs. Forty drop spindles were put in flat cars used for work on Hillsborough bridge. A great many running repairs were also made in this department, which are too numerous to mention.

BRASS FOUNDRY.

Output : Brass castings 3,767 lbs., car bushings 4,346 lbs., and 368 lbs. of battery zincs, making in all 8,981 lbs. of castings.

PAINT SHOP.

Four first-class cars, 3 second-class cars, 4 postal and baggage cars, 18 box cars, 150 box car roofs, and 9 engines were painted. Ten first-class cars, 5 second-class cars, and 5 postal and baggage cars were cleaned and varnished. Engineer's office was papered and painted. Six hundred panes of glass were put in.

ROAD AND TRAFFIC DEPARTMENTS.

Nine new frogs were made, and 8 frogs repaired. Ten sets of switch gear were made and several sets repaired, and various other ordinary repairs made. Four track levels, 39 loading platforms, 1 lorry, 4 doors and frames, 3 gates, 4 cattle stages, 8 boxes, 6 freight trucks, 3 baggage trucks, and 12 smoke stacks for engine houses were made. Fifteen switch frames were made and mounted. 10,304 lbs. of iron, and 612 lbs. of steel were forged. Six freight trucks, 2 hand cars, 1 lorry and 6 track jacks were repaired. Forty barrels of plugs were cut.

I am pleased to report that we are in a better position for handling traffic than ever before.

Yours truly,

W. S. POOLE,
Mechanical Superintendent.

A.—PRINCE EDWARD ISLAND RAILWAY.

Mechanical Department.

Statement of Cost of Locomotive Power for the Year ended June 30, 1904.

Months.	Miles run by Engines, less Ballasting.	Cost of							Average per 100 Miles.						
		Mechanical Superintendent's Salary, Clerks and Office Expenses.	Enginemen's Wages.	Fuel.	Oil, Waste, &c.	Repairs.	Engine Houses and Turntables.	Water.	Total.	Mechanical Superintendent's Salary, &c.	Enginemen's Wages.	Fuel.	Oil, Waste, &c.	Repairs.	Engine Houses and Turntables.	Water.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1903—July	34,460	198 36	1,853 78	2,393 87	117 81	1,504 65	170 27	4 08	6,242 82	0 57	5 38	6 95	0 35	4 36	0 49	0 01	18 11
August	32,066	189 75	1,879 33	2,312 84	144 77	1,267 95	162 42	5 12	5,962 18	0 59	5 86	7 21	0 45	3 95	0 51	0 02	18 59
September	33,736	190 95	2,207 81	2,533 38	170 46	1,234 07	130 74	151 45	6,618 86	0 57	6 54	7 51	0 50	3 66	0 39	0 45	19 62
October	34,222	249 04	1,891 49	2,264 66	99 39	546 46	208 55	2 20	5,264 79	0 73	5 54	6 62	0 28	1 60	0 60	0 01	15 38
November	32,121	193 08	1,953 16	2,698 60	178 90	1,799 68	190 11	.....	7,013 53	0 60	6 08	8 40	0 56	5 60	0 59	.....	21 83
December	32,589	207 62	2,643 13	3,197 25	193 57	2,154 53	240 72	2 93	8,639 75	0 64	8 11	9 81	0 59	6 61	0 74	0 01	26 51
1904—January	32,869	199 77	5,270 18	3,000 14	212 66	1,932 56	300 30	192 94	11,109 15	0 60	16 04	9 13	0 65	5 88	0 91	0 59	33 80
February	10,867	199 15	2,893 20	3,892 85	228 13	1,866 74	339 72	14 18	9,433 97	0 49	7 08	9 52	0 56	4 57	0 83	0 03	23 08
March	36,074	196 67	2,930 70	3,691 36	219 42	2,000 97	286 47	158 73	9,487 32	0 55	8 13	10 24	0 61	5 54	0 79	0 44	26 30
April	31,275	195 72	2,452 63	4,157 63	152 95	1,709 25	158 32	18 15	8,844 65	0 63	7 84	13 29	0 49	5 47	0 50	0 06	28 28
May	33,070	219 18	2,497 40	4,449 29	172 76	1,117 72	157 50	1 30	8,585 15	0 66	7 56	13 36	0 52	3 38	0 47	0 01	25 96
June	32,658	207 75	2,475 42	1,501 86	189 17	20,708 90	185 35	3 54	28,272 29	0 63	7 58	13 79	0 58	63 41	0 57	0 01	86 57
Totals	406,007	2,447 04	30,951 53	39,067 03	2,080 29	37,843 48	2,530 17	554 62	115,474 46	0 60	7 62	9 62	0 52	9 33	0 62	0 13	28 41

Note.—In repairs for June is included the cost of two new engines, Nos. 1 and 11.

S. F. HODGSON,
Mechanical Accountant.

4-5 EDWARD VII., A. 1905

B.—PRINCE EDWARD

MECHANICAL

STATEMENT of the Performance and Consumption

Months.	Hours in Steam.	Train Mileage.				Mileage by Engines.			
		Passenger.	Freight and Mixed	Ballasting.	Piloting.	With Train.	Light.	Shunting.	Total.
1903—July	3,626	12,669	14,534	358	96	27,657	123	7,088	34,868
August	3,654	11,336	13,546	2,940		27,822	101	7,358	35,281
September	4,120	11,255	14,592	3,528	165	29,540	148	8,216	37,904
October	4,257	13,580	12,511	5,108		31,199	66	8,438	39,703
November	3,438	8,794	16,982	952		25,828	48	7,271	33,147
December	3,436	9,106	16,148			25,254	49	7,286	32,589
1904 January	3,781	11 741	12,581		404	24,726	142	8,001	32,869
February	4,992	13,116	11,334		5,731	30,181	314	10,372	40,867
March	4,323	11,197	11,850		4,135	27,182	237	8,655	36,074
April	3,511	10,651	13,790		34	24,475	12	6,788	31,275
May	3,936	10,455	14,393	1,458	70	26,376	378	7,959	34,713
June	3,875	10,786	14,059	2,596	44	27,485	186	8,043	35,714
Totals	46,949	134,686	165,420	16,940	10,679	327,725	1,804	95,475	425,004

SESSIONAL PAPER No. 20

ISLAND RAILWAY.

DEPARTMENT.

of Locomotives for the year ended June 30, 1904.

TOTAL MILEAGE.		AVERAGE MILEAGE.			CONSUMPTION.				CONSUMPTION PER 100 MILES RUN BY ENGINES.			
Cars.	Snow Ploughs.	Average of Cars per Mile run with train.	Miles to one hour in steam.	Of Cars to one of Engines.	Tons of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.	Pounds of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.
182,577	....	6·62	9·61	5·24	858	1,486	324	563	4,921	4·26	0·93	1·61
190,658	.....	6·85	9·65	5·40	741	1,716	416	609	4,200	4·86	1·17	1·72
192,691	....	6·56	9·20	5·08	794	1,866	400	597	4,189	4·92	1·05	1·57
208,257	..	6·67	9·32	5·24	875	2,064	444	699	4,458	5·20	1·12	1·76
168,058	.....	6·50	9·64	5·07	792	1,742	459	615	4,778	5·25	1·38	1·85
160,405	470	6·35	9·49	4·92	969	2,096	460	676	5,946	6·43	1·41	2·07
130,285	8,038	5·35	8·69	3·96	860	1,984	468	716	5,233	6·03	1·42	2·18
109,505	15,252	4·48	8·20	2·68	812	2,296	558	580	3,973	5·61	1·36	1·41
129,127	12,428	5·60	8·32	3·58	947	2,260	464	719	5,250	6·26	1·28	1·99
142,747	33	5·84	8·90	4·56	963	1,556	856	517	6,158	4·97	1·13	1·65
167,596	....	6·37	8·82	4·82	952	1,868	548	641	5,485	5·38	1·57	1·84
178,976	....	6·52	9·21	5·01	974	2,063	580	687	5,454	5·77	1·62	1·92
1,960,882	36,221	6·18	9·05	4·61	10,537	22,997	5,477	7,619	4,958	5·41	1·28	1·79

S. F. HODGSON,
Mechanical Accountant.

C.—PRINCE EDWARD ISLAND RAILWAY.

Mechanical Department.

Monthly Statement of Car Mileage for Year ended June 30, 1904.

Months.	First Class.	Second Class and Baggage.	Postal and Smoking.	Box and Stock.	Platform.	Total.
1903.—July	43,248	24,832	32,037	67,596	14,864	182,577
August	35,259	21,698	31,829	59,344	42,528	190,658
September	37,198	23,456	33,175	64,091	34,771	192,691
October	28,137	22,254	33,926	74,445	49,495	208,257
November	24,849	20,005	28,599	81,502	13,103	168,058
December	28,788	20,793	27,790	73,161	9,873	160,405
1904—January	23,412	21,788	22,211	50,864	12,010	130,285
February	23,265	17,931	22,499	37,470	8,340	109,505
March	21,910	19,241	21,095	49,278	17,603	129,127
April	24,889	22,778	23,690	56,079	15,311	142,747
May	24,741	22,742	30,587	74,628	14,898	167,596
June	27,197	21,887	31,481	62,747	35,664	178,976
Total	342,893	259,405	338,919	751,205	268,460	1,960,882
Less—Ballasting	.....	.....	17,668	15	120,462	138,145
	342,893	259,405	321,251	751,190	147,998	1,822,737

S. F. HODGSON.
Mechanical Accountant.

SESSIONAL PAPER No. 20

D.—PRINCE EDWARD ISLAND RAILWAY.

Mechanical Department.

Statement showing the number of Locomotives and of the various classes of Cars and other Rolling Stock on July, 1903, and on June 30, 1904.

	Locomotives.	Classification of Cars.																
		1st Class.	2nd Class.	Combined 2nd and Baggage.	Postal and Smoking.	Combined Postal and Baggage.	Baggage.	Pay Car.	Vans.	Box Freight.	Refrigerator Cars.	Stock.	Coal.	Platform.	Total.	Snow Ploughs	Plangers.	Total.
On hand serviceable, June 30, 1903	22	21	8	6	3	4	3	1	2	213	1	17	18	147	444	8	7	15
Condemned, July 1, 1903	3	..	..	..	..	..	1	..	1	..	..	..	..	..	2	..	..	..
Total	25	21	8	6	3	4	4	1	3	213	1	17	18	147	446	8	7	15
Purchased during the year on capital account	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Built during the year on capital account	..	2	2	..	..	..	..	..	1	7	2	4	2	..	20	1	..	1
Total	27	23	10	6	3	4	4	1	4	220	3	21	20	147	466	9	7	16
Condemned, July 1, 1903	3	..	..	..	..	..	1	..	1	..	..	..	..	..	2	..	..	..
" during the year	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2	..	1	1
Total condemned	3	..	..	..	..	1	1	..	1	..	..	..	..	1	4	..	1	1
Less rebuilt	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1
" purchased and charged to working expenses	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
To be rebuilt	1	..	..	..	..	1	1	..	1	..	..	..	..	..	3	..	..	..
Add serviceable and repairing	26	23	10	6	3	3	3	1	3	220	3	21	20	147	463	9	7	16
Total	27	23	10	6	3	4	4	1	4	220	3	21	20	147	466	9	7	16

S. F. HODGSON,
Mechanical Accountant.

E.—PRINCE EDWARD ISLAND RAILWAY.

Mechanical Department.

Comparative Statement of the Expenses of the Mechanical Department for the years ended June 30, 1903 and 1904.

	1903.	1904.
The miles run by trains were	291,263	310,785
" engines were	389,953	406,007
" cars were	1,745,365	1,822,737
" snow ploughs were	14,026	36,221
	$ cts.	$ cts.
The cost of locomotive power was	73,052 05	115,474 46
" repairs to cars was	22,035 10	15,434 81
" " passenger cars was	6,354 23	6,156 88
" " postal and smoking cars was	5,822 78	1,469 61
" " freight cars and vans was	9,858 09	7,808 32
" labour, oils and waste was	594 79	660 90
" repairs to snow ploughs and flangers was	611 90	1,540 00
The cost of locomotive power per 100 miles run by trains was	25 08	37 16
" " " " engines was	18 73	28 44
" " " " cars was	4 18	6 33
The cost of repairs to cars per 100 miles run by trains was	7 56	4 97
" " " engines was	5 65	3 80
" " " cars was	1 26	0 84
The cost of labour, oil and waste for packing per 100 miles run by trains was	0 20	0 21
" " " " engines was	0 15	0 16
" " " " cars was	0 03	0 03
The repairs to passenger cars per 100 miles run by trains were	2 18	1 98
" postal and smoking cars were	1 99	0 47
" freight cars and vans were	3 38	2 51

S. F. HODGSON,
Mechanical Accountant.

QUEBEC CANALS.

OFFICE OF THE SUPERINTENDING ENGINEER,
MONTREAL, July, 1904.

C. SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa.

SIR,—I have the honour to submit herewith my annual report on the works under my charge for the fiscal year ended June 30, 1904.

This division comprises the Lachine, the Soulanges and the Beauharnois canals on the St. Lawrence route ; the Ste. Annes, the Carillon and the Grenville canals, on the Ottawa river, and the St. Ours and the Chambly canals on the Richelieu river.

Of these the Lachine canal is by far the most important on account of its immediate connection with the harbour of Montreal. The traffic through it during the year just ended showed an increase of about 20 per cent over 1902-1903.

Navigation was carried on uninterruptedly on all the canals in this division except in the case of the Soulanges canal, where it had to be stopped for 24 hours on August 15, 1903, one of the upper gates in the guard lock having been thrown off its pivot by the rush of water in a gale and also in the case of the Chambly canal where boats had to be detained some 36 hours, from May 29 to 31 last in order to allow some repair work to be done at the Rivière des Iroquois culvert.

The Chambly canal could only be opened for traffic on May 20 last, the work at River des Iroquois culvert which had been taken off the hands of the contractors, not being far enough advanced to permit of the admission of water in the reach before the above date.

LACHINE CANAL.

Length, 8½ miles ; 5 locks, 270 x 45 feet ; 14 feet of water on sills ; total rise, 45 feet.

Old locks, 200 x 45 feet, still available with 9 feet of water on sills.

REPAIRS AND RENEWALS.

The principal repairs and renewals performed during the year were as follows :—

Rebuilding one pair of spare gates for old lock No. 3 and one pair for old lock No. 5.

Replacing cast iron by cast steel racks on Wellington bridge.

Replacing cast iron rollers and tread by steel ones on the Seigneurs Street bridge.

Rebuilding bridge across the tail-race of waste weir No. 2. The old wooden stringers being replaced by iron beams.

Laying a concrete floor in regulating weir at Côte St. Paul.

Renewing valves in the regulating weirs, at Côte St. Paul and St. Gabriel.

Replacing 22 wooden mooring posts on the locks by cast iron posts laid in concrete.

Placing life protection ladders, 35 feet apart, along the sides of St. Gabriel basins Nos. 1, 2 and 3, and also around Wellington basin.

Rebuilding nine cribs, from low water to the top, in the timber basins at Lachine and providing two new ones.

Building a new boom 3 feet wide and 300 feet long and placing it below the lower approach to lock No. 5, on the south side.

Building a temporary boom to be placed along the face of the south wall of basin No. 2, to keep vessels off the concrete toe of the new wall being built there.

Grading Oak street and covering it with iron dross and cinders.

Installing timber planer alongside of the machine shop. This planer was brought down from the Beauharnois canal where there was no more use for it.

Transferring the canal telephone line from the north to the south side of the canal, the new wires being strung on the poles, already carrying the current for the electric lighting and for the operating of the lock gates.

In addition to the above a considerable amount of work was done in keeping the canal structures such as locks bridges, fences, buildings, roads, drains, tools, &c., in a good state of repairs.

INCOME.

Repairing old Locks Nos. 1 and 2.

A contract for this work was signed by Messrs. Coulson, Quinlan and Robertson on October 29, 1902, and operations were commenced in November, 1902. The contractors have carried on the work in an energetic manner during the past year and there now only remains to be done a portion of the chamber wall and upper recess on the south side and the breast wall to complete lock No. 2. Lock No. 1 was completed last fall. The gates are nearly completed and will be put in position as soon as possible.

Some necessary repairs to the south wall of basin No. 1, immediately below lock No. 2 are in progress and will be completed in July or early in August.

Rebuilding wall on south side of basin No. 2.

This work is being done by day's labour. As stated in previous reports the foundations of the new wall can only be laid while the canal is unwatered in the spring. The wall which is about 1,450 feet in length, consists of concrete laid to a depth of 22 feet below canal level, a portion of this being built in under the present masonry wall.

There still remains some 600 lineal feet of the foundations to be laid.

Only 178 lineal feet could be built in April last, the unusually high state of the St. Lawrence allowing work to be performed during a couple of weeks only. Some underpinning had also to be done in the small side basin on the north side of basin No. 2, where the side wall had been undermined.

Repairing slope walls.

Owing to the lateness of the season the contractor, Mr. J. B. de Lorimer, did not resume work till the middle of April, and could only build about 170 cubic yards of wall. He also supplied 4,000 cubic yards of stone for future operations.

A final estimate of his work is now being prepared.

Paving Mill Street.

The western section of this street was paved during April, May and June last, the work being done under contract by the Sicily Asphaltum Paving Co.

The paving consists of granite blocks laid on concrete foundations.

The whole of the street is now paved and the heavy traffic going through it will derive great benefit from the work.

Raising St. Gabriel Shed No. 1.

This shed is 750 feet long, 400 feet of it, at the south end, have been raised about 9 feet in order to allow freight to be handled directly from the shed into the steamers or from the steamers into the shed. The height of the roof is such that teams can drive up into the shed with or for freight.

The work was performed in a very satisfactory manner by the contractors, Messrs. Quinlan & Robertson.

CAPITAL.

Dredging.

The dredging done in the Lachine canal during the year consisted of 11,000 cubic yards of shale and boulders at the upper entrance, and about 800 cubic yards in the small basins off basin No. 1. This work was done during the fall and summer of 1903.

In May and June of this year the dredge was employed cleaning the channel at the sites of the new bridge at Côte St. Paul and Napoleon street, the work being paid for by the contractors for the superstructure of the bridges.

Mr. H. R. Lordly is in charge of the above works.

Lake St. Louis survey.

The field work during the former part of the year consisted of finishing the survey of the north side of the lake from Lakeside to Lachine. The whole of the north side, with topographical work on the shore, is now completed.

The survey was transferred to the Marine and Fisheries Department in April last.

Electric installations.

Owing to unexpected delays in procuring some of the appliances for the operation of lock gates and sluices here, it was found impossible to have the system completed for the opening of navigation this spring. A generator ordered early last winter was not yet delivered at the end of the year. Tests were made, however, of the machinery to be used and gave very satisfactory results. It is expected that most of the gates will be equipped during the present season.

Repairs to vessels.

There is nothing to record under this head except the ordinary maintenance of the fleet.

Côte St. Paul and Brewster Bridges.

Contracts were awarded to Messrs. Quinlan & Robertson and to Mr. John Quinlan respectively for the substructures of the Côte St. Paul and Brewster bridges.

Both structures are exactly similar in design and dimensions. The old wooden bridges and their abutments were removed but the centre pier was preserved in both cases. The former bridges consisted of a swing span with fixed spans at each end. The new bridges are formed of single swing spanning the whole width of the canal (205 feet), with channels 75 feet wide on each side of the centre pier.

The old centre pier at Côte St. Paul was widened and lengthened by means of solid cribwork built down to the present bottom of the canal and brought up to three feet below the level of the water. On top of this a concrete wall, 6 feet base, 4 feet at the top and 5 feet high, was laid skirting the pier except on the sides of the pivot pier. The latter and both abutments which are also of concrete, being carried down to 22 feet below water level.

The mode of building around the centre pier at Brewster's is somewhat different from that at Côte St. Paul. The rock level here being much lower, piles were used along both sides, they being driven down 30 feet below water level and a strong platform laid on top of them to receive a concrete wall similar in dimensions as the one laid at Côte St. Paul. The ends of this pier are composed of solid cribwork started at 17 feet below water level and brought up to the level of the platform just described, a concrete wall encircling the whole of the centre pier as in the case of the Côte St. Paul bridge.

The superstructure of both bridges was supplied and erected by the Dominion Bridge Co.

The space available for approaches at both points being limited it was found necessary in order to provide sufficient clearance from the top of the pivot pier to the floor of the bridge, without making the approaches too steep, to give a 6 inch camber to the lower chord.

Both bridges are to be operated by electric power, the motors being supplied by the bridge company.

The electric installation and the erection of the two above mentioned bridges are under the supervision of Mr. L. S. Pariseau.

SOULANGES CANAL.

Length 14 miles ; 5 locks, 270 x 45 feet, 15 feet of water on sills ; total rise, 84 feet.

REPAIRS AND RENEWALS

During the year just ended the worn out cast-iron rollers in the lock sluices have been replaced by cast-steel ones and the working of the sluices thus rendered much smoother and easier.

In July, 1904, the water was drawn off the reaches between locks 1 and 3, for the purpose of repairing the lower sills of locks 2 and 3. The covering plates on the top of the oak sills were found to have been broken and partly torn away by vessels dragging upon them. Although the ordinary depth of water here is 15 feet it is observed that, owing to the drawing of water by lockage, a surging motion is given the mass of water in the reaches which, at times, reduces the depth on the sills from 12 to 18 inches. The men operating the locks were consequently warned against allowing vessels to move in or out of the locks when the level is thus reduced. No further damage has been done to the sills since.

Last fall a very serious slide occurred in the eastern embankment of regulating basin No. 2. Some 180 feet in length of this bank which is 35 feet in height settled down about 5 feet and were pushed out towards the basin below about 3 feet, half the thickness of the bank moving out bodily.

In order to perform the necessary repairs it was decided to unwater the basin, which was done by means of a rough coffer dam thrown across the head race opposite lock No. 2. A strong crib was then built into the toe of the bank, well anchored to the rock and heavily loaded with stone. As other parts of the embankment showed signs of weakening, it was thought best to run this crib along the whole length of the bank and leave the cofferdam across the tail-race in position, the top of the latter being removed to a depth of 3 feet under water so as to allow of the feeding of the reach below in the regular way.

No further slides have taken place in the eastern embankment, but in May last, both the north and south banks began to move out. Cracks developed in them which were at once filled with good clay to prevent rainwater from getting into them, but the banks have been leaking since and permanent repairs will have to be done during the present summer.

A considerable quantity of stone lining was done during last year. The whole of the banks between the lower entrance and St. Ferreol bridge is now in a perfect stage of repair. The stone used for this purpose, as well as for filling the toe crib just described, was taken out of the quarry at the lower entrance and partly out of the bottom of regulating basin No. 2, which had been unwatered to repair the eastern bank as stated before.

The serious leak which existed at the foot of lock 2 on the river side was completely stopped during last winter. The bank was removed on about half its width for 150 feet, concrete was laid on top of the rock for a certain height and the bank reformed with good clay well protected with stone.

Capital.

Shops.

Mr. T. Préfontaine, Jr., was awarded a contract for the building of shops, stores and lodgings for this canal.

These consist of four buildings, viz.: a store-house and stable at the power-house, a blacksmith and machinery shop, a store-house for timber, lumber and other goods, with lodgings on the second story for the storekeeper and an oil and paint store. The last three buildings are located between the canal embankment and the Ottawa river, opposite lock No. 2, near the protection dock. All of them are of solid brick, with iron frames in the roofs. Machinery for the shops will be provided during the coming year.

Mr. L. S. Pariseau is in charge of construction on this canal.

LEAUHARNOIS CANAL.

Length 11¼ miles; 9 locks, 200 x 45 feet; 9 feet of water on sills; total rise 82½ feet.

This canal is only being used by a few market boats and stray barges. The staff has been reduced to one man at each lock and isolated bridge, and three men in charge of ferries.

The work of repairs done here during the year consists of the maintenance of buildings, roads, bridges, fences and ditches.

Considerable work was done on the repairing of the Hungray Bay dyke and road which had been damaged by ice during last spring floods.

The bottoms and lower sills of locks Nos. 11 and 13 had also to be specially attended to in the spring.

At lock 11 a leak had developed in the lower sill which necessitated the filling of a large hole with concrete.

Most of the lower sills of the locks on this canal were treated in the same manner within the last few years.

CHAMBLY CANAL.

Length 12 miles; 9 locks, 118 x 22½ feet; 6½ feet of water on the sills; total rise 74 feet.

As stated above, this canal was only reopened to navigation on May 20 this spring on account of some pressing work which had to be accomplished at the Little Rivière des Iroquois culvert.

REPAIRS AND RENEWALS.

The main items of repairs performed during the year were as follows:—

Laying 900 tons of gravel on the towing path. Building two pair of lock gates and rebuilding two sills, the voids between the timbers being filled with concrete. Rebuilding approaches to lock No. 1. Rebuilding three piers in the harbour entrance at St. Johns, from the top to the water line.

Besides the above all the structures on the canal, the roads, ditches, fences, &c., were kept in proper repair throughout the year.

During last spring's floods the power-house supplying electric current for the lighting of the canal as well as for the working of the shops was displaced and considerably damaged by moving ice. This is due to the permanent raising of the Richeliéu river by the Montreal Light, Heat and Power Company's dam at Chambly, and the damage sustained will be made good by the company. In the meantime the electric machinery, which luckily was only slightly injured, was transferred to a temporary building, the electric current necessary to run it being supplied by the Montreal Light, Heat and Power Company.

It is expected that a permanent building will be put up by them to replace the old one, in the course of the present year.

INCOME.

Culvert at Little River des Iroquois.

The contractor for this work is Mr. W. J. Finn. He resumed operations early in December, 1903, and owing to the unusual severe winter and the difficulty he experienced in procuring men, the beginning of April found him so backward in the execution of his contract that the work had to be taken off his hands.

He agreed to allow the department to finish the work on its own account, which is now being done under the supervision of Mr. L. S. Pariseau.

Waste-weirs at Ste. Therese Island and at the Electric Power-house.

The old wooden weirs which were in a very dilapidated condition were removed and rebuilt in concrete.

All the waste-weirs on this canal, except one at Fryer's farm, are now formed of concrete and will necessitate very little repair for a number of years to come.

Bridges at Chambly Basin and Chambly Canton.

The old wooden swing bridges at both these points have been replaced by steel structures which were erected under contract by the Phœnix Bridge and Iron Works.

The pivot piers and abutments had to be rebuilt and extended to suit the new bridges which are wider than the old ones. Concrete was used for the purpose.

ST. OURS LOCK.

Length of canal, ⅛ mile; one lock, 200 x 45 feet; 7 feet of water on sills; total rise, 5 feet.

Repairs and Renewals.

Besides the ordinary maintenance of the grounds, lock-walls, lock-gates, buildings, fences, scows, &c., the following works were performed during the year.

Landing wharf below lock.—The old landing wharf which consisted of a wooden platform about 400 feet long, resting on the top of two rows of piles driven twelve feet apart, was removed and concrete piers 22 feet x 8 feet at the base and 18 feet x 5 feet at the top and 20 feet apart were substituted. The new platform, 5 feet wide, will consist of iron I beams spanning the spaces between the piers, and covered with 4-inch pine plank. The work is now completed save the platform, which will be laid during the coming summer.

The lower entrance was also cleaned, widened and deepened, and is thus considerably improved.

The old wharf above the lock will be rebuilt during the fiscal year 1904-5.

The above work was done under the direct supervision of Mr. L. S. Pariseau.

STE. ANNE'S LOCK.

Length, ⅛ mile ; one lock, 200 x 45 feet : 9 feet of water on sills ; total rise, 3 feet.

Old lock still available ; 200 x 45 feet ; 6 feet of water on sills ; total rise, 3 feet.

Mr. S. D. Hamilton, overseer of this canal, died on January 13, 1904, and Mr. Napoleon Lague appointed in his stead on March 5, 1904.

There is nothing to mention here except the ordinary maintenance of the canal buildings and structures.

A pair of spare gates were placed in position, and the old gates, which were in a pretty shaky condition, were hauled on to the beach above the lock for repairs during the present season.

CARILLON AND GRENVILLE CANALS.

Carillon Canal.—Length, ¾ miles ; two locks, 200 x 45 feet ; 9 feet of water on sills ; total rise, 16 feet.

Grenville Canal.—Length, 5¾ miles; five locks, 200 x 45 feet: 9 feet of water on sills; total rise 43¾ feet.

Both these canals are under one overseer. They are separated by a stretch of navigable river about five miles long, and between them is to be found the old Chute à Blondeau lock, which was abandoned at the completion of the dam at the head of the new Carillon canal in 1883, the rise at the old lock having been practically obliterated.

I have to report the death on October 22 last of Mr. James B. Cushing, late overseer of these canals. His son, Mr. F. M. H. Cushing, was appointed acting overseer, and is still acting pending a permanent appointment to the vacant position.

Repairs and Renewals.

The principal items of repairs performed during the year were as follows:—

Rebuilding the mooring pier at Bradford's bay, a short distance above the upper entrance to the old canal.

Rebuilding the wing walls below the waste-weirs at lock 5 and 6. They consist of heavy masonry laid in cement mortar.

Renewing the swing bridge at Stonefield. The new structure is of steel and its pivot piers and abutments of stone masonry in cement mortar. The superstructure was supplied and erected under contract by the Phœnix Bridge and Iron Works.

INCOME.

Guide Piers at Upper Entrance to Carillon Canal.

The contract work on the guide pier was practically completed last fall, there remaining nothing to be done except the top finishing of the concrete walls and some filling between them. This work was completed before July 1 except the rolling of the stone filling on top of the pier.

Mr. F. J. Lynch is in charge of construction work on these canals.

Annexed to this report are tabular statements showing highest and lowest water on the mitre sills of the locks at the upper and lower entrances of each canal, statements of fines and damages collected during the fiscal year 1903-04; also statement giving dates of closing and opening each canal.

I have the honour to be, sir,

Your obedient servant,

ERNEST MARCEAU,

Superintending Engineer, Quebec Canals.

QUEBEC CANALS.

STATEMENT of the opening and closing of navigation.

Name of Canals.	Closing.	Opening.
Lachine Canal	3rd December, 1903.	2nd May, 1904.
Soulanges Canal	2nd " 1903.	1st " 1904.
Beauharnois Canal	30th November, 1903.	9th " 1904.
Chambly Canal	30th " 1903	20th " 1904.
St. Ours Lock	26th " 1903.	26th April, 1904.
Ste. Anne Lock	30th " 1903.	22nd " 1904.
Carillon and Grenville Canals	30th " 1903.	2nd May, 1904.

LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of new Lock No. 1, at lower entrance, and new Lock No. 5, at upper entrance, during the fiscal year ended June 30, 1904.

MONTHS.	NEW LOCK NO. 1, LOWER SILL.				NEW LOCK NO. 5, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	19	1	17	3	18	1	16	4
August	17	9	16	1	16	8	15	7
September	16	4	15	8	15	9	15	5
October	17	2	15	8	16	1	15	4
November	15	9	14	1	15	6	14	4
December	33	0	14	2	15	5	14	0
1904.								
January	30	10	25	5	15	6	13	5
February	27	11	25	0	15	9	13	8
March	30	7	25	0	18	0	14	4
April	40	7	21	3	19	11	17	2
May	23	9	22	0	20	5	19	4
June	23	11	19	9	20	5	18	5

Mitre sill of old Lock No. 1, 2′ 2″ above sill of new Lock No. 1
" " " 5, 5′ 0″ " " " 5

BEAUHARNOIS CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 6, at lower entrance, and Lock No. 4, at upper entrance, during the fiscal year ended June 30, 1904.

MONTHS.	LOCK NO. 1, LOWER SILL.				LOCK NO. 14, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	12	1	11	6	11	11	11	8
August	11	5	10	3	11	11	11	4
September	10	6	10	1	11	6	11	3
October	10	7	10	1	11	4	11	1
November	10	1	9	3	11	2	10	6
December	11	3	9	3	11	11	10	5
1904.								
January	19	6	11	4	12	0	10	7
February	24	6	15	6	11	5	10	9
March	20	0	14	6	12	8	10	8
April	14	6	12	8	12	11	11	9
May	14	10	14	0	12	4	12	0
June	14	8	12	6	12	5	1	1

CHAMBLY CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 9, at lower entrance, and Lock No. 1, at upper entrance, during the fiscal year ended June 30, 1904.

MONTHS	LOCK NO. 9, LOWER SILL.				LOCK NO. 1, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	11	0	9	11	8	11	8	2
August	10	5	9	9	8	11	8	1
September	9	9	8	3	8	8	7	3
October	8	9	8	3	8	7	7	0
November	8	10	8	1	8	1	6	9
December	8	10	7	10	7	9	7	3
1904.								
January	8	6	8	1	7	10	7	7
February	8	10	8	6	8	3	7	9
March	18	2	8	10	10	8	8	2
April	21	5	14	10	11	4	10	10
May	15	10	13	9	11	6	10	2
June	13	11	10	11	10	3	8	8

ST. OURS LOCK.

STATEMENT showing the depth of the river water on the mitre sills of St. Ours lock, during the fiscal year ended June 30, 1904.

MONTHS.	LOCK NO. 1, LOWER SILL.				LOCK NO. 1, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	10	10	9	5	9	7	9	0
August	9	5	8	4	9	3	9	10
September	8	3	7	5	8	11	8	4
October	8	10	8	0	9	6	7	4
November	8	1	6	1	8	9	8	0
December	10	6	6	6	8	2	7	6
1904.								
January	10	6	8	10	8	0	7	8
February	9	10	8	11	8	2	8	0
March	18	1	9	6	13	10	8	0
April	21	6	15	8	16	11	12	0
May	17	4	15	3	13	4	11	5
June	15	10	11	8	11	7	9	10

STE. ANNE'S LOCK.

STATEMENT showing the depth of the river water on the mitre sills of Ste. Anne's Lock, during the fiscal year ended June 30, 1904.

MONTHS.	LOCK NO. 1, LOWER SILL.				LOCK NO. 1, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	13	0	11	7	14	8	12	4
August	11	8	10	11	12	4	11	4
September	11	1	10	9	11	8	11	0
October	11	4	10	9	12	5	11	5
November	10	9	9	9	11	11	11	0
December	11	1	9	1	13	8	10	0
1904.								
January	11	1	10	1	13	0	10	5
February	11	8	10	3	14	5	11	0
March	13	4	10	1	13	11	11	0
April	15	0	13	2	17	6	14	2
May	15	7	14	3	18	6	16	2
June	15	7	13	9	18	2	14	7

CARILLON CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Locks Nos. 1 and 2, Carillon canal, during the fiscal year ended June 30, 1904.

MONTHS.	LOCK NO. 1, LOWER SILL.				LOCK NO. 2, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	16	2	13	6	16	7	13	2
August	13	6	12	0	13	2	11	11
September	12	10	12	1	12	6	11	6
October	13	8	12	2	13	6	12	1
November	12	11	11	10	12	8	11	7
December	12	10	11	11	14	10	11	3
1904.								
January	12	11	12	0	11	9	11	0
February	14	8	12	0	11	7	10	7
March	15	4	12	0	13	5	10	4
April	20	0	15	5	18	8	14	0
May	20	10	19	3	21	8	18	6
June	20	4	16	4	21	0	16	6

GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Locks Nos. 3 and 7, Grenville canal, for the fiscal year ended June 30, 1904.

MONTHS.	LOCK NO. 3, LOWER SILL.				LOCK NO. 7, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	21	1	16	1	17	4	13	6
August	16	0	14	5	13	4	12	0
September	15	2	13	11	12	6	11	4
October	16	6	15	9	14	0	12	1
November	15	5	13	11	13	0	11	6
December	17	10	13	9	11	6	9	9
1904.								
January	20	7	16	1	10	6	9	7
February	23	10	20	9	9	7	9	3
March	24	9	19	1	14	0	9	7
April	24	6	19	3	20	0	16	5
May	26	8	22	10	23	0	19	9
June	25	11	20	3	22	4	17	3

SOULANGES CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 1 at lower entrance, and Lock No. 6, at upper entrance, during the fiscal year ended June 30, 1904.

MONTHS.	LOCK NO. 1, LOWER SILL.				LOCK NO. 6, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	19	4	18	3	17	3	17	0
August	18	9	18	0	17	3	16	7
September	17	9	17	4	17	0	16	8
October	18	0	17	3	16	9	16	6
November	17	6	16	5	16	7	16	3
December	18	2	16	3	17	0	15	9
1904.								
January	20	8	17	6	17	3	17	0
February	31	8	20	5	17	2	16	8
March	23	3	21	1	18	3	17	1
April	24	8	20	0	18	0	17	4
May	22	0	20	8	17	9	17	5
June	22	0	19	8	17	9	17	7

LACHINE CANAL.

STATEMENT of Fines and Damages collected during the fiscal year ending June 30, 1904.

Date.	Names of Vessels.	Names of Owners.	Fines.	Damages.	Remarks.
1903.			$ cts.	$ cts.	
July 13.	Yacht 'Satanella'...	Unknown	.....	10 00	Damages to St. Gabriel Shed No. 1.
1904.					
June 8...	Str. 'Sharples'.....	Great Lakes Trans. Co.	.....	60 00	Damages to lock wall, Lock No. 4.
		Total..... ...	.....	70 00	

CHAMBLY CANAL.

STATEMENT of Fines and Damages collected during the fiscal year ending June 30, 1904.

Date.	Names of Vessels.	Names of Owners.	Fines.	Damages.	Remarks.
1903.			$ cts.	$ cts.	
July 30..	B. 'I. S. Ethier'....	L. C. Hebert...	.....	5 00	Damages to canal dredge.
1904.			.....		
June 16 .	B. 'Marie Stella'...	F. Demarais..	.....	10 00	Damages to floating bridge, C. Canton.
" 28..	B. 'B. Huber'.....	Capt. R. Winne	.....	20 00	Damages to swing bridge, head of Ste. Thérèse Island.
		Total..... ..	.....	35 00	

SOULANGES CANAL.

STATEMENT of Fines and Damages collected during the fiscal year ending June 30, 1904.

Date.	Names of Vessel.	Names of Owner.	Fines.	Damages.	Remarks.
1903.			$ cts.	$ cts.	
July 16	Str. Waconda	Ont. and Great Lakes Nav. Co.		40 00	Damages to coping, lock No. 1.
" 11	" Fairmont	Mont. Transp. Co		40 00	" " 4.
" 31	" Filgate	Cornwall Nav. Co	20 00		Excess of speed and obstruction.
Aug. 1	Barge Nadine	Quebec Route		70 00	Damages to coping, lock No. 2.
" 11	Str. Geo. C. Howe	Ont. and Great Lakes Nav. Co.		100 00	" " 1.
Oct. 29	" Davidson	St. Lawrence Trans. Co.		20 00	" " 1.
Nov. 4	" Arabian	J. B. Fairgrieve		20 00	Damages to railing, lock No. 1.
" 4	" Hubert Larkin	W. J. Poupore & Bros.	20 00		Excess of speed and offensive language.
" 6	" Iona	Messrs. Hall & Co	20 00		Disobedience and offensive language.
" 10	" Wahconda	Ont. and Great Lakes Nav. Co.		20 00	Damages to coping, lock No. 2.
1904.					
June 4	Str. Arabian	J. B. Fairgrieve		20 00	" " 6.
" 9	" Avon	Ogdensburg Coal and Towing Co.	25 00		Excess of speed and disobedience.
" 27	" Tunet Cape	Can. Lakes and Ont. Nav. Co.		20 00	Damages to coping, lock No. 3.
		Totals	85 00	340 00	

ST. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,
CORNWALL, July 1, 1904.

SIR,—I beg to submit my annual report upon works of construction and survey, in connection with the enlargement of the St. Lawrence canals, for the year ending June 30, 1904.

CORNWALL CANAL

(Opened for traffic, 1843.)

This canal was originally designed and constructed to allow vessels of not over nine feet draught to surmount the Long Sault rapids, from Cornwall to Dickenson's Landing, a distance of 11¼ miles, with a rise of 48 feet, originally made in six locks, but since reduced to five.

The canal is situated on the north side of the St. Lawrence river on ground sloping rapidly towards the river, and generally about 30 feet above it. The high embankments thus rendered necessary when not perfectly constructed, or when resting on treacherous foundations, which are common along this section of the river, have given rise to frequent landslides, entailing, as in 1888, very serious consequences.

In order to make the St. Lawrence navigable by vessels of the same class that pass through the Welland canal, and to carry out the general scheme of enlargement adopted by the government, work was commenced on the Cornwall canal division in 1876.

The work consisted in deepening, widening and straightening the original channel, strengthening and protecting the embankments, and in building enlarged locks 270 feet long by 45 feet wide, with not less than 14 feet of water on the mitre-sill, when the river is at its lowest stage; supply weirs, bridges, &c., also in addition to the above, and not included in the original contracts, the repair or renewal of the foundations and general restoration of the damaged masonry of the old locks 15, 16, 17, 18, 19 and 20, and the adaptation of the basin between old locks 16 and 17 to the purpose of a dry dock. Also dams, weirs and the guard-gates, and automatic dam above lock 20, rendered necessary by the adoption of the Sheik's island channel, and the masonry superstructure with ice-breaker on the old pier at the upper entrance.

The Sheik's island channel does away with the imperfectly constructed embankments west of Mille Roches, embraced in the contracts for sections Nos. 6 and 7 and parts of 5 and 8, which were abandoned when the decision to construct the channel had been arrived at. This diversion from the line of the old canal does away with three and a half miles of very tortuous canal navigation, unfit for the class of vessels for which the enlarged canal system was intended, and substitutes two and three-quarter miles of what can be classed as lake navigation, thus dividing the canal into two sections, the lower or eastern section, six miles long ; upper or western section, two and a-quarter miles, with two and three-quarter miles of lake navigation between, and saving about half a mile in distance.

The guard-gates and automatic dam at lock 20 were constructed to protect the lower reaches from the large body of water impounded by the construction of the Sheik's Island dams, in case of accident to the locks or other structures.

For the purpose of construction, the canal was divided into nine sections, commencing with No. 1, at the lower or eastern entrance. The work of enlargement was commenced on this section in 1876 and was finished in 1882, except some work on old lock

17, and the weir and head-race to the mills, which were afterwards completed under the contract for section No. 2.

The next section to be let was No. 10, to Messrs. Jocks, Delorimier & Broder, who commenced work in 1884, and, with the exception of the upper entrance, completed it in 1895.

LIST OF CONTRACTORS.

Locality.	Section.	Contractors.	Date of Contract.
Cornwall	2	Wm. Davis & Sons	Nov. 5, 1888.
Lock No. 19	3	"	"
Maple Grove	4	"	"
Sheik's Island Dams	5, 6, 7, 8	"	June 19, 1893.
Mille Roches	5	The Gilbert Blasting and Dredging Co.	Nov. 2, 1888.
Moulinette	6	" "	"
Sand Bridge	7	" "	"
Long Sault	8	" "	"
Dickson's Landing	10	Jocks, Delorimier & Broder	April 7, 1884.
Upper Entrance	10	Weddell & McAuliffe	Sept. 28, 1899.
Strengthening bank east of Pitt Street, Cornwall	1	J. J. Fallon	Feb. 8, 1902.
" "	1	Bellhouse, Dillon & Co	Sept. 16, 1903.
Cornwall Canal	1 to 10	Michael P. Davis	May 20, 1902.
"	1 to 10	"	Nov. 6, 1901.
"	1 to 10	"	April 25, 1903.

NOTE.—Section No. 8 adjoins No. 10.

The work to complete the upper entrance was let to Messrs. Weddell & McAuliffe, under contract entered into on September 28, 1899, to be completed by November 13, 1900.

It consisted in the extension, straightening and widening of the channel on the north or landward side of the present entrance, from deep water, which commences 900 feet west of the upper gates of guard lock No. 21, and extends to a point about 1,100 feet west of the lighthouse on the south entrance pier, a distance of about 3,500 feet.

This contract was wholly completed on June 5, 1902, and the final estimate returned to the department on February 7, 1903.

On February 8, 1902, a contract was entered into with Mr. J. J. Fallon for widening and strengthening the north bank east of Pitt street, at Cornwall. This consists in the widening of the north bank of the canal and the building of a revetment wall for a distance of 1,000 feet from the east end of the present steamboat wharf at foot of Pitt street.

The work done during the past year was as follows :—

During the fall of 1902 and the following winter, stone was prepared at the contractor's quarry at Cambridge and shipped to Cornwall.

In April, 1903, dams were constructed to permit of the work being completed after the water was let into the canal on May 1.

Excavation was resumed on April 1 and was completed last month.

Laying the foundation for and the building of the revetment wall was resumed on April 9, and was completed in September.

Stone has been placed in rear of the completed wall.

This work was wholly completed in June last.

New wharf.—Owing to the defectiveness of the old steamboat wharf at the foot of Pitt St., immediately west of the above mentioned contract, on February 6, 1904, an

agreement was made with Mr. J. J. Fallon for the construction of a new wharf. This consisted in raising both the north and south revetment walls to two feet in height, and between them a timber and plank superstructure of pine was erected for a distance of 170 feet.

This wharf was completed on June 18 last.

In connection with these works a contract was entered into with Messrs. Bellhouse, Dillon & Co., of Montreal, for the supply of cement to be used in construction of the revetment wall.

On May 20, 1902, a contract was entered into with Mr. M. P. Davis for the mechanism for operating the locks, guard gates, weirs and bridges of the Cornwall canal, to be completed August 15, 1903.

This contract was wholly completed and the final estimate forwarded to the department on March 28, 1903.

A contract was entered into with Mr. M. P. Davis, on November 6, 1901, for the erection of switch houses required in connection with the installation of the electric lighting plant. This contract was completed and the final estimate sent to the department on November 5, 1902.

On April 25, 1903, a contract was entered into with Mr. M. P. Davis for the installation of the machinery for operating the locks of the old Cornwall canal, and also for motors to be installed in the workshops of the Cornwall canal, to be completed August 1, 1903. This work is complete with the exception of installing the motors which will be done as soon as the workshops are erected.

In connection with the additional water power granted at lock 18 to the Paper Mill Company, attention is again directed to the necessity for rebuilding and enlarging the regulating weir at old lock 17.

It may be well to draw your attention to the fact that a portion of the south bank of this canal, situated immediately west of lock 17, opposite the town of Cornwall, has a curvature altogether inadequate to the present requirements.

This canal, when enlarged, was intended for barges of increased dimensions and draught.

For the past few years the shipping has made such rapid strides, that to-day, not only barges of increased dimensions but ocean steamers also pass through this canal, and during high winds it is with great difficulty that they get around this particular sharp curve, without having sometimes to run into the slope of this bank.

Since the upper reaches of this canal were completed, an additional depth of two feet of water has been added, thereby increasing materially the pressure against the bank, which is by no means counterbalanced by that on the river side.

At this point the surface of the canal water is 24 feet higher than that of the river water and indications of great strain are now visible, which may, in the near future cause some serious trouble. I would therefore direct your attention to the necessity of rebuilding this portion of the south bank, with such an alignment and strength suited to the present as well as the future requirements.

I may also add that a sharp point on the south bank of the canal, immediately opposite the upper dam of the Sheik's Island channel could be reduced to the great advantage of the large vessels.

FARRAN'S POINT CANAL.

(Opened for traffic, 1847.)

This canal is situated about five miles west of the village of Dickenson's Landing, the head of the Cornwall canal. It was built to overcome a short, swift rapid above the village of Farran's Point, and was about three-quarters of a mile long, with a lockage of 3½ feet.

In the year 1847, the original canal for nine feet navigation was opened for traffic. The present enlarged canal has been extended to Empey's Bay, thus increasing the length to 1½ miles and the lockage to 4 feet.

The enlargement having been authorized, tenders were advertised for, and on June 1, 1897, a contract was entered into with the Canadian Construction Company to undertake the necessary work, and to have it completed by January 31, 1899.

The time for completion has since been extended.

This work was wholly completed on October 11, 1902, and the final estimate was completed October, 1903.

WILLIAMSBURG CANALS.

RAPIDE PLAT CANAL.

(Opened for traffic, 1847.)

The lower entrance of the Rapide Plat or Morrisburg canal is situated about 9½ miles west of the Farran's Point canal. It was designed to overcome the rapids of Rapide Plat by a lock of 11½ feet lift, and extends from the village of Morrisburg to Flagg's Bay, a distance of 3¾ miles.

The original canal, intended for vessels of 9 feet draught, was opened for traffic in 1847.

The work of enlarging for the 14 feet draught vessels was commenced in 1884, and consisted in the deepening and widening of the old channel, the building of a new lift and a guard lock of 270 feet by 45 feet, supply weirs, regulating weirs, &c., and the construction of a new road to replace the highway destroyed by the canal improvements.

The old lift lock was put in thorough repair, and the sill lowered so as to admit of 9 feet navigation through it at lowest water.

LIST OF CONTRACTORS.

Locality.	Section.	Contractors.	Date of Contrac
Morrisburg	1	Poupore & Fraser	Jan. 26, 1891.
Mariatown	2	Weddell Dredging Co	Jan. 12, 1891.
New Road	3	Poupore & Fraser	Jan. 26, 1891.
Flagg's Bay	4	William Broder	April 2, 1884.
Upper Entrance		P. H. Gilbert	April 17, 1901.

The work on all sections except at upper entrance has been completed and the final estimates completed.

Upper entrance.—This work consists in the straightening, deepening and widening of the channel, the removal of the old north and south piers, and the construction of a new and more extensive pier, with stone superstructure and ice-breaker on the south side.

The contract for this work was awarded to Mr. P. H. Gilbert, and was commenced on April 17, 1901.

The work done during the fiscal year is as follows:—

Dredging operations were continued until December 14, 1903, resumed on May 14, 1904, and will be completed in a few weeks.

The masonry of the stone superstructure of south pier was resumed on October 5, 1903, and discontinued on January 2, 1904, and nothing further has been done this year, owing to the prevailing high water, cut stone for masonry has been prepared. It is the intention to complete this contract by the end of present season.

I have also to draw your attention to the advantage of affording a better alignment for the benefit of large vessels, at a point opposite the Farlinger property, situated about half a mile east of guard lock No. 24, on the north side of this canal and where a curve could be materially reduced.

This improvement was contemplated some seven or eight years ago, but afterwards abandoned.

GALOPS CANAL.

(Opened for traffic, 1847.)

Between the head of the Rapide Plat canal and the foot of the Galops, at the village of Iroquois, there is a 4½-mile stretch of river navigation. What is now known as the Galops canal was originally built as two separate canals, with a short stretch of river navigation between.

These were opened for 9 feet navigation in 1847, the lower or eastern section called the Point Iroquois canal, commenced at the village of Iroquois and extended to Presqu'ile. It was 3 miles long, and had a lockage of 5 feet 7 inches, which overcame the rapid of Point aux Iroquois.

The upper or western section, known as the Galops canal, commenced at the village of Cardinal and extended up stream to the head of the Galops rapids; it had a lockage of 6 feet 8 inches, and surmounted the Cardinal and Galops rapids called by the early forwarders 'the Upper Galoo's or Chain of Rocks.'

About ten years after the completion of these canals, they were connected by an embankment, otherwise the 'Junction canal,' built in the river, and other improvements made increasing the total length of canal to 7½ miles, and the lockage to 14 feet 10 inches, thus avoiding the rapid current of the short stretch of river navigation.

In 1888, Messrs. Murray & Cleveland entered into a contract with the government to enlarge the upper entrance; the work consisting of the building of a new lift-lock in Round bay, connecting directly with the river immediately below the Galops rapids, and a new guard lock, each 270 feet long by 45 feet wide, and a supply weir. The removal of the old guard lock, and also the deepening, widening and straightening of the channel from the upper entrance past McLaughlin's Point to the new locks at Round bay, a distance of about 1 mile.

The lift-lock at Cardinal is now cut off from the canal and connected directly with the river by means of a large opening which has been made through the old canal bank below, thus rendering free access from the river to the wharf at the foot of old lock 26, for the accommodation of the village of Cardinal.

The improvement of the channel at McLaughlin's Point by widening it towards the north, as authorized was commenced with steam shovel in September, 1900, and completed with a dredge in October, 1903.

Earth excavation.—The work of excavation in prism of canal west of Nine-mile road was commenced on July 5, 1902, and continued until October 6, when all excavation which could be done by means of steam shovel was completed. The excavation remaining was dredged out and completed in October, 1903.

The improvement to give a line of sight from the lift-lock to the head of the canal, which necessitated the removal of that portion of McLaughlin's hill above a plane 12 feet above normal water in canal, having been authorized, arrangements were made for

the necessary right of way, and excavation was commenced in October, 1902, continued during the season of 1903, and resumed on May 28, 1904, and is still in progress.

Total amount of earth excavation for the year was about 43,042 cubic yards.

Rock excavation.—Rock excavation below water at the site of old lock 27 was resumed May 4, 1904, and continued until June 30, when this work was practically completed, except a narrow portion in front of old lockhouse.

The total amount of excavation for the year was about 5,418 cubic yards.

The cribwork extension of the southeast pier below lift-lock No. 28, which was completed to the level of high water last year, has been protected by a stone talus. To complete this work a masonry wall four feet above the normal water in the river will be constructed. This work, however, will not be attempted during the prevailing high water.

The stone protection to banks is practically completed; only a small portion is now undergoing repairs and will be completed next month.

Waling pieces for the protection of the mooring pier east of the guard lock were placed during April, 1903.

In the year 1897 the government advertised for tenders for the enlargement of the other portions of the canal, dividing it into two sections of about three miles each —Iroquois and Cardinal. Messrs. Larkin & Sangster obtained the first named, and Messrs. Wm. Davis & Sons the latter. In each case the work was to be completed by January 31, 1899, but the time for completion has since been extended.

The scheme for enlargement contemplated the raising of the level of the reach between Iroquois and Cardinal six feet, that is, to the height of the lowest known level of the river at the head of the Galops rapid, and overcoming the whole rise with one lift-lock at Iroquois.

IROQUOIS SECTION.

Work on the enlargement of this section was commenced in May, 1897. It consisted of excavating a new entrance channel, the building of two entrance piers, a 'flotilla lock,' 800 feet long by 50 feet wide, weirs, bridges, retaining walls, &c., and the straightening, deepening and widening of the canal for about three miles ; also the reconstruction of the highway north of the old canal, &c.

The work of building masonry foundation walls for the Iroquois water works, the renewal and repair of the government wharf at the village of Iroquois, and the widening and deepening of the government ditch on the north side of the canal have all been completed under this contract.

An electric light cable has been placed under the canal.

This work was entirely completed in November, 1902.

The final estimate of this work is being prepared.

CARDINAL SECTION.

Commencing at the western end of the Iroquois section at Presqu'ile, it extends west through the rear of the village of Cardinal to Gates' Point, the eastern end of the upper entrance contract, a distance of about three miles.

The work consists in widening, deepening and straightening of the old canal at each end of the section, and construction of an entirely new piece of canal through and on either side of the village of Cardinal, requiring the excavation of the prism, the building of banks and their protection, and the construction of cribwork and masonry revetments through the 'deep cut'; also the building of bridge piers and abutments, &c.

The chief feature is the 'deep cut,' in rear of the village of Cardinal, 5,900 feet long and 68 feet at the highest point, requiring the excavation of about 2,000,000 cubic yards of material.

Earth excavation.—The total quantity of earth excavation on this section is about 2,600,000 cubic yards. Of this quantity there remains to be done but a small amount of trimming up on the canal prism, and removing of boulders found to be above grade. A dredge and derrick with diver were employed at this work, which was completed this season.

Rock excavation.—The total quantity of rock excavation on this section has proved to be about 19,000 cubic yards, of which about 10,000 cubic yards was contained in rock 'in situ' in bottom of 'deep cut.' The excavation of rock 'in situ' was completed November 13, 1902.

The cribwork revetment, which extends through a portion of the 'deep cut' was completed in 1902. The total length of this cribwork revetment is 5,258 lineal feet, and contains about 317,000 cubic feet of timber, 293,000 pounds of iron in bolts, and 45,000 cubic yards of stone filling, both inside and in rear.

The masonry revetment walls, laid in Portland cement, which rests on top of this cribwork, were completed October 4, 1902. Some pointing remaining to be done was completed this season.

Embankments.—All embankments have been made to their required height and width; repairs to those portions destroyed by slides which occurred during April last were completed in August, 1903.

The work of protecting the slopes of the 'deep cut' by the placing on them of pitched stone facing was completed December 22, 1902. Some repairs to this pitched stone facing, which have been found necessary are nearing completion.

The sodding throughout the section is in progress and was finished in August, 1903.

The stone protection to slopes of banks (where not affected by slides), was completed May 20, 1903.

The fencing throughout the section was completed last season.

The placing of gravel on new public road constructed on north side of 'deep cut' was completed in October, 1903.

The forming of ditches has been completed.

The masonry culvert at Nine Mile Road was completed November 13, 1902.

The necessary mooring posts in 'deep cut' were placed in position in August, 1903, and iron handrails were also at that time provided for each of the three flights of stone steps on upper slopes of 'deep cut.'

A timber culvert was also placed under the highway along north side of 'deep cut' west of the Nine Mile Road, in August, 1903.

During the month of April, 1903, owing to the water in this level having been lowered, several large slides occurred in the 'green' embankments both east and west of 'deep cut'. The embankment at the slides east of 'deep cut' has already been repaired, and that west of 'deep cut' was repaired in August, 1903.

Not only were the slides removed but cutting bays into the face of the banks to form a proper seat for stone filling for the protection to the lower portion of the bank and to form a foundation for the usual stone protection to be placed at water line.

The work of filling the bays and protecting the lower portion of the slope was completed in December, 1903, and was allowed to settle and consolidate throughout the winter.

In April, 1904, the water in the canal was lowered and the placing of ordinary stone protection on face of bank, as well as filling in rear of same with sodding on top was proceeded with and completed on May 25, 1904.

Repairs to bermes and upper slopes in the 'deep cut' rendered necessary by the action of the heavy spring rains were commenced May 26, and completed June 30, 1904.

GALOPS RAPID IMPROVEMENT.

This work comprises the excavation of a straight channel 200 feet wide and 17 feet deep through the shoals of the rapids which are known by the following names : Upper Bar, North and Caledonia shoals, Island shoal and Lower Bar. The whole of these shallow places are included in a distance of 3,300 feet.

The work is sub-aqueous and consists in blasting and dredging the rock in the rapid.

The work as originally designed for the 200-foot channel was finished in November, 1888, but in view of the apparent lowering of the water surface of the River St. Lawrence, and for the purpose of making a satisfactory test and survey of its bottom, and at the same time to be prepared for the removal of any material above the original contract grade, an agreement was entered into in the year 1897 with the Gilbert Bros. Engineering Company, Limited, to perform the necessary work. Operations were commenced the same year. In the year 1898 it was decided to widen the entrance to the existing channel south or towards Adam's island, with a view to eventually increase the width of the channel as originally excavated to 300 feet.

The plant employed consists of a dredge, drill scow, tugs, scows, &c., all adapted to the special work in hand.

As there was no appropriation for continuing the work in 1902-03, no work of any kind was done, but the plant was maintained in good working order.

For 1903-04, an appropriation was granted and the work was resumed in May, 1904.

During the past two months the drilling and blasting has been confined to the lowering of the grade on the Island Shoal, and the work of drilling at the Lower Bar is now in progress.

To complete the channel and render it safe in all stages of the river, Lower Bar should be widened to 300 feet at bottom and some detached rock outlying North Shoal either taken out or rolled into the adjacent deep water. With this done and the dam closing the gut completed, the new channel, which is the main channel of the river, will be brought into general use by all classes of vessels, except probably the old time 9 foot draught barges, which are now towed in batches of four or six.

NORTH CHANNEL.

This channel commences about one mile west of the Upper Entrance of the Galops canal and extends in a straight line to deep water off Chimney Point, a distance of 2⅓ miles.

It was constructed to avoid the sinuous natural channel passing through American waters, which is about three-quarters of a mile longer, and could not be navigated with safety by the class of vessels for which the present enlarged canals were designed.

The work consists in the excavation of a channel originally 200 feet wide, which was subsequently increased to 300 feet, through the bed of the St. Lawrence river and Drummond and Spencer islands, the construction of embankments on either side of the channel, and of piers and of cribs at its eastern and western entrances.

The work having been authorized and tenders advertised for, it was let to Mr. M. A. Cleveland, May 14, 1897, the work to be finished on January 31, 1899.

The time has since been extended.

The chief reason for urging the construction of this channel was to complete the deep or 14-foot navigation from the Prescott reach to the head of the Galops canal and rapids, instead of following the old and circuitous American channel across the flat-rock shoals, over which navigation is limited to nine feet, besides involving a distance of three-quarters of a mile in excess of the North Channel route, practically the shortest obtainable between Prescott and the head of the Galops canal.

Since the construction of the north channel from its earliest unfinished stage, when less than 200 feet was the available width, it has become the principal navigable channel for vessels of all draughts, and will so continue in any stages of the river.

In its present condition it is full 300 feet wide on the bottom, except at the head of Spencer island, where for a short distance it is only 200 feet in the clear, and will remain at that width until next season, when the material which is being reserved for backing the breakwater will be removed and full width of 300 feet obtained.

The depth of water in the channel at its present high stage is 17 feet. The channel is temporarily lighted by one gas buoy at the head of the breakwater, and by a lamp at the lower entrance pier.

The stone revetment and slope walls within the prism are finished, except the proposed continuous line of coping which has proved to be necessary and has been provided for in estimate.

The work done during the past year is as follows :—

Earth excavation.—Dredging operations were carried on, at south side of channel at Drummond's island, and cleaning up bottom up to September 23, 1903, when the entire width of prism was completed and the channel at this point finished, thus completing channel from head of Drummond island to east dam. Dredging was resumed at Spencer's island on April 13, 1904.

Rock excavation.—The dredging of excavated rock in prism east of lower entrance began September 23, 1903, and continued during the season. Dredging at this point resumed June 28, 1904, and continued to June 30. Only a small portion remains to complete channel at this point.

Cribwork at upper entrance, consisting of a continuous breakwater on the north side of the channel from Spencer's island to the lighthouse, was completed to the level of normal water in October, 1902. The placing of footing course to superstructure on cribwork above Spencer's island was begun December 1, 1903, and continued to December 12, 1903, when 1,200 lineal feet of footing had been placed. Owing to the extreme high water prevailing it has not been possible to continue this work the present season, but stone is being prepared for this purpose.

'GUT DAM.'

This dam is being built in what is known as 'The Gut' channel between Adams island, a Canadian island, and Les Galops island, a United States island. This necessitated procuring the consent of the United States government thereto, which was formally obtained.

The extreme length of the structure is about 900 feet, and its maximum depth, when completed, will be 17 feet. At this point where the dam is situated, the current had a velocity of 3·70 miles per hour, which increased greatly as the work progressed.

The primary object of the dam is to shut off a side or cross current in the Galops rapid (which crossed that channel at a maximum angle of 20° 40′), and thereby render that channel safer for the passage of vessels. A secondary object is to raise the water in the upper entrance of the Galops canal, by lessening the cross-sectional area of discharge of the river. The depth of water on the sill of lock 27, at its lowest known stage, was but 13 feet.

The objects of the dam seem to have been attained with the structure in its present state.

The current crossing the Galops rapid channel has been overcome. The water in the upper entrance of the Galops canal has been raised.

If the crest of the dam is to be built only to the height of the level of ordinary water, viz., 9 feet on the sill of old lock No. 27, the currents in the Galops rapid channel will vary at periods of high and low water, placing vessels using that channel at a disadvantage. By raising the crest of the dam to at least the level of high water, these currents will be made constant.

The authority for proceeding with the work was received on September 10, 1903. Work was commenced on the following day, and on November 11, 'the Gut' was completely closed by the rock dump which forms in part the rock talus on the lower side of the cribwork core of the dam.

The seats for the cribs were dredged to such a depth as to insure a good foundation, bed rock being reached in several places. Dredging for the seats of cribs was commenced on November 14, 1903, and discontinued for that season on the 21st of the same month. Dredging was resumed on April 19, 1904, and discontinued on May 4. Only a small amount of dredging remains to be done.

The first crib for the core of the dam was placed on November 21, 1903, and on December 2, when this work was discontinued for the season, 13 cribs had been sunk in place. Five anchor cribs, which also served as guard cribs, were also sunk. Placing cribs was resumed on April 29, 1904, and up to June 30, 29 cribs had been sunk in place and filled.

The aprons of rock fill at either end of the dam were partially placed in May, 1904.

The indurated clay talus is being placed.

The space between the cribs and the rock dump is being filled with material obtained from reducing the top of the rock dump.

With the water at its present stage—11·60 feet on the sill of old lock 27, it will not be practicable to complete the dam this season.

RIVER REACHES.

From the head of the Soulanges canal to the foot of the Cornwall canal, the length of the navigable channel is about 32¾ miles; of this distance, 30 miles is through Lake St. Francis.

A channel has been buoyed between the above mentioned points, with a minimum depth of 16 feet at lowest water, and has been brought into general use.

St. Regis section, 2½ miles east of Cornwall, is situated about mid-way between the foot of Cornwall island and First Crab island. The work here consists in the dredging of a channel 1,100 feet long and 300 feet wide through what is known as the St. Regis shoals, and protecting it with a dyke terminating with crib piers. This work was let to Messrs. Manning & Macdonald, May 24, 1898, to be completed November 30, 1898.

This work, however, was not completed until the fall of 1900, but has since been generally used by all classes of vessels, and is an important link in the 14-foot or deep water channel.

Hamilton island section, between the seventh and eleventh mile east of the Cornwall canal.

This work consists in the dredging of a channel through or of widening and straightening it through the undermentioned shoals, and the construction of a light-house crib on the Middle Ground, viz.:—

The Clark's island shoal, 7½ miles east of Cornwall; the dredging at this point was substituted for that proposed to be done at Horseback.

The Middle Ground, 10 miles east of Cornwall.

The Highlander shoal, 10½ miles east of Cornwall.

A contract was entered into with Messrs. Manning & Macdonald, May 24, 1898, to be completed November 30, 1898.

The time stated for completion has necessarily been extended, but all the works embraced in the Manning & Macdonald contracts are now finished.

The final estimates were sent to the department on August 8, 1903.

By way of improving the river channel, so as to afford a more direct course to vessels, I beg to submit that several salient points and shoals should, in course of time, be removed.

For the present I will confine myself to draw your attention to the improvements which could be made at the following places, viz.:—

Immediately east of lower entrance of the Farran's Point canal, Baker's Point could be reduced.

Between Aultsville and Morrisburg, a shoal known as 'Jack Ass Shoal' could be removed. Upon this shoal, through some mishap, vessels have frequently been aground or entirely wrecked.

Immediately below the lower entrance of the Rapide Plat canal, the reducing of Rose's Point would materially improve the channel.

At the head of the Rapide Plat canal, immediately west of the present Gilbert contract, on the north side of the river, a salient point, known as Robertson's Point, could also be reduced.

Iroquois, on the north side of the river the channel opposite Pine Tree Point could be materially improved.

In view of these improvements I would suggest that a careful examination and surveys be made as soon as convenient.

I have the honour to be, sir,

Your obedient servant,

L. N. RHEAUME.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

ST. LAWRENCE CANALS.

OFFICE OF THE SUPERINTENDENT OF OPERATION,
MORRISBURG, ONT., June 30, 1904.

SIR,—I have the honour to submit herewith the Annual Report on the maintenance and operation of the St. Lawrence canals for the fiscal year ending June 30, 1904.

THE CORNWALL CANAL.

This canal was closed to navigation on December 3, 1903, and opened on May 1, 1904.

During the season navigation was uninterrupted.

The electric light and power service during the year has been most satisfactory; the number of lights out at any one time on the line of over 17 miles not averaging 3 per cent of the total number installed. During the winter season there are only 100 lights burning, which allows of lighting each lock and weir and lock-house, and the full stretch of canal in the neighbourhood of the town of Cornwall. Lights are necessary on the locks during the winter, as a man is on duty all the time to regulate the water levels.

During the season of 1903 the equipment of the old locks with electrical machinery was completed, and is in good working order.

All the work of installing the electric light and machinery was done by Mr. M. P. Davis, who selected Messrs. T. Pringle & Son, electrical and mill engineers, Montreal, to design and superintend the work of installation.

I have secured from Messrs. Pringle & Son a short technical description of the work, which is presented herewith in the hope that it may prove interesting:—

'The electrical equipment of the Cornwall canal is supplied with current from the power house of Mr. M. P. Davis, near Mille Roches, on the Cornwall canal. Messrs. T. Pringle & Son were the engineers, and the electrical equipment was installed under the personal supervision of Mr. F. H. Leonard, jr.

'The plant is situated just below the lower dam on the Cornwall canal, near the village of Mille Roches, and takes water from the upper level. There is obtained a head under ordinary circumstances of about 30 feet; but on account of high back-water the plant was designed for operation temporarily on a minimum head of 18 feet.

'The power house foundation rests on the solid rock, the wheel pits being excavated to a depth of about 10 feet below the surface of the bed rock. The arches over the wheel-pit are of concrete, but faced on the outside with rough picked masonry of large dimensions, which gives to the entire structure a very substantial appearance. The power house is constructed on a steel frame having brick walls and heavy plank roof.

'Provision was made for four hydraulic units, giving an ultimate capacity of approximately 6,000 h.p. Each unit consists of 5—35 inch new Sampson wheels by Wm. Hamilton & Company, with horizontal shafts directly coupled to a 1,000 K.W. Bullock generator, operating at 2,200 volts at 180 r.p.m. at 60 cycles.

'The switchboard gallery is about 19 feet above the main floor of the power house, and accessible by means of a flight of iron steps in the centre and two iron ladders at either end of the power house.

'At present but one unit is installed, with 2—50 k.w. exciters, 285 r.p.m. Switchboard panels are provided for the control of the generators, the exciters and the various feeders.

'The arc lights, of which 230 are located along the bank of the canal, were furnished by the G. I. Company of New York. A three-panel switchboard controls the operation of these lamps, and each circuit is regulated by a 100 light G.I. regulator capable of maintaining practically constant current with any number of lamps in circuit from 1—100, its full capacity.

'The current for these circuits is stepped up from 2,200 volts by means of transformers of 60 k.w. each, the transformers being provided with intermediate taps, so that besides the full voltage of 11,000 v, if a smaller number of lamps are required either 4,400 or 6,600 volts can be used, thus reducing the reactance necessary to maintain a proper voltage and permitting of a higher power factor under the conditions of partial load.

'Current for the power circuit (three in number) is obtained by stepping up from the generating voltage of 11,000 volts by means of 3-150 k.w. transformers which supply the 3-pole transmission lines reaching various locks along the eleven miles of canal.

'The primaries of both arc lighting and power transformers are controlled by oil switches connected to the bus bars on the main switchboard, a separate panel being provided for each class of service. The power circuits are passed through a separate high potential switchboard which connects the transformers to the three separate 3-phase power lines.

'Lightning arresters and choke coils are provided for the various circuits. The wiring of the station between generator and switchboards to the wire tower, from which the circuits are fanned out to the different pole lines, is all carried in 3-conductor lead encased cable, allowing ample space for additional cables.

'The pole lines for the lighting and power circuits are of substantial construction, an exceedingly straight lot of cedar poles being used. These range from 30 to 50 feet in height, none having less than 7-inch tops, on which are mounted special cross arms provided with hickory pins which were boiled in stearic acid. Five and one-half inch triple petticoat glass insulators have been used with satisfactory results with the 11,000 volt circuits. Bare copper conductor is used, spaced 16-inch on centres, and on account of the low current per line no attempt was made to use the triangular arrangement of conductor, the three wires of each circuit being arranged side by side without transposition.

'The 3-phase power circuits occupy the upper arms and on the lower arms are located the single-phase arc circuits. The main lines occupy the south bank of the canal.

'Crossings are made at the Mille Roches bridge in armoured paper cables, one for 3-phase, 2,200 volts power and lighting circuits, and another for the single-phase, 11,000 volts arc circuit. Another crossing is made at lock 18, which provides for 3-phase power circuit, as well as another 11,000 volts arc circuit to provide for power and lighting on the north bank below this point.

At the Stormont bridge near Cornwall, another 11,000 volts arc cable provides for lighting the two piers at the bridge, and an emergency cable is laid just above lock 17, so that in case of accident to any of the other crossings, or a break in the line, emergency connection can be made in the houses covering the cable heads on the bank of the canal.

'Extreme care has been taken in locating and setting out the line, a transit being used for this work, making the alignment and location almost perfect.

'The line is well guyed on the curves with galvanized signal strand well anchored, or in some cases tied to a heavy guy stub. On the sharp curves, poles are double armed to provide for the severe strain.

'The lamps are hung from short iron pipe brackets which pass through the pole and are held in place by a collar at the front side and a lock mat at the back, and braced on the under side by an iron pipe strut fastened to the face of the pole by two lag screws. An insulated hanger is used at the outer end of the bracket (2 feet 6 inches from the pole) which, together with the insulators on the lamps, renders danger

from grounding in the lamp frame and bracket extremely remote. The lamps are trimmed from the pole without lowering lamp.

'Loops are cut in from transposition insulators by means of No. 8 flexible, rubber covered conductor, soldered to the bare copper line conductors.

'The lighting of the canal is carried out by an arc lamp located on every fourth pole with poles averaging about 100 feet apart.

'A light is located at the piers as the lock is approached from below, and an arc lamp is also located at each side of the lock just below the gate. Two more lamps are located at the middle of each lock and two at the upper end of the lock just at the lock gates. There are also two more at the upper piers.

'Below lock 18 both banks are illuminated all the way by lamps located 400 feet apart. Above lock 18 the lamps are located on the south side of the canal only, with the exception of prominent points, bridges, &c., where lamps are provided on both sides.

'The upper level broadens into a lake of considerable proportions, about 30 feet deep near the lower end. The lamps are here less frequently located on the prominent points on the south side until the upper dam is reached, where the canal again narrows to the usual dimensions.

'The lamps are again located about 400 feet apart on the south bank up to lock 21, which is a guard lock. On the long pier on the south side protecting the canal entrance, lamps are placed, as well as on the north bank as far up as Dickenson's Landing.

'An illumination so perfect as above described, you can readily imagine, makes navigation at night as easy as in daylight, and lockages are performed as easily and as rapidly as they could be in daytime.

'At the upper end of each lock on the south bank there is located a small switchboard cabin, 7′ 0″ x 9′ 0″. On the little island between the two locks is located another switchboard cabin, and at the upper end of the lock on the north side of the second lock is another cabin.

'In the first of those above mentioned are placed three transformers, and connecting to the 11,000 v. mains which step voltage from the line pressure to 550 v., and it is at this pressure that the motors operate. A high tension fuse board is provided to take care of the primary connections to the transformers. The long inclosed fuse has friction contracts at either end, and by pulling these fuses out of the end clips by means of a wooden stick with a hook at the end, the circuit can be opened in case of temporary trouble, or for any purpose whatever when it becomes necessary to disconnect the transformers. The secondary of the transformers passes through the switch on the switchboard which distributes the secondary current to the motors, two of which are located on each side of the lock. Armoured cables with paper insulation is used to conduct the current from the switch cabin to the motors located on the same side of the lock.

The connection for motors on the opposite side is carried through armoured cable which leads down through the floor of the switch cabin and passes through a hole drilled in the stone coping of the lock to the upper stop-log check. The cable turns over a radius of 16 inches at the top and passes down the check.

'Where the cable crosses on the lock bottom a timber is held on top grooved on the bottom side to receive the cable, and as the top of this timber is well below the breast wall at the entrance of the lock, there is no danger of the cable ever being disturbed.

'Rising on the opposite side of the lock in the stop-log check, the cable again passes through a hole drilled in the stone coping until it comes out of the earth back of the masonry under the next switch cabin, from this switch cabin the cable is carried into the third switch cabin on the north side of the old locks.

'On the switchboards in each of the cabins are placed the motor starting switches connected to auto-starters, which control the motors on one side of each lock. From the switch cabin on the south side are operated two motors, the first motor being connected by armoured cable—reaching from the switch cabin under ground to the first motor. The second motor is reached by conductors running from the switch cabin over-

head to a pole very near the motor at the lower end of the lock, armoured cable connecting from the pole underground as far as the masonry and checked into the masonry where it passes over to the motor.

'The switch cabin on the little island between the two locks controls the two motors on the north side of the new locks and two motors on the south side of the old locks. The third switch cabin controls the motors on the north side of the old locks, as well as the motor operating the weir gate mechanism.

'The arrangement is identical in all the locks, with the exception of new lock 15 and old locks 15, 16 and 17 which are not provided with weir gates.

'The equipment for operating the lock gates and weirs was adapted for use in connection with the winches and weir gate mechanism already installed, without disturbing their capability for hand operation should occasion require.

'Four winches are located at each end of the lock, two on each side, one of which handles the chain to close the opposite gate, and the other handles the chain to open the gate on the side at which these winches are located.

'Across the top of each gate is a bridge on which is mounted the worms and rods for opening the two valves in each of the gates when required to fill or empty the lock.

'The electrical equipment utilized practically all of this machinery as it stood, with only the necessary changes to make the mechanical connections with the electrical drive.

'The motors selected are all of 5 h.p. for both the lock gate and weir mechanism.

'To operate the two winding winches which control the chains for opening and closing the gates, one motor is located near the hollow quoin at the heel of the lock gate—which is coupled by means of short length of shafting and friction clutch coupling to the winch near this point, and by means of another friction clutch and length of shaft sufficient to reach the other winch, supported at intermediate points by pedestals carrying journal boxes mounted on cut stone foundation for the mechanism.

'As there is a reduction of about 42 to 1, which gives a speed of about 26 rev. for the operating shaft, we concluded to use the worm gear rather than a more complicated triple reduction by means of spur gears. A sub-base extends under the motor and also carries the casing for the worm and worm gear. The worm runs in oil, the thrust being taken up by alternate steel and bronze collars and thrust discs, adjustable at one end by means of set screws and check nut to compensate for wear.

The motor, which runs at 1,200 r.p.m., is coupled directly to the worm shaft, the worm being cut out of solid steel and meshing into a hobbed bronze worm wheel turning on a shaft mounted on babbitted bearings. The projection at one end of this shaft having mounted upon it the friction coupling controlling the working shafts, the opposite end being coupled to a short length of shaft which carries the chain wheel similar to a sheave in a chain hoist, and from this point by means of a welded link chain made endless is turned at an angle to the main working shaft, the supplementary shaft for operating the valves in the lock gates. This shaft is supported on bearings secured to the coping of the lock and placed about ½-inch above its surface and continued under the bridge on the lock gate, a universal coupling being utilized at a point near the gate pivot so that the travel of this joint is minimized.

The arc of the circle through which this coupling passes is provided for by a swivel box carrying the end of the driven shaft, and the travel in and out is allowed for by having the chain sheave run free on the shaft except when engaged by a jaw clutch keyed to the shaft so as to allow the shaft to run in and out as it passes through this arc and engage or disengage the clutch at the proper time for controlling the valve mechanism. The clutch being disengaged allows the driving sheave to run loose on the shaft, the shaft itself remaining idle during the time the gate is open, and is only put into operation when the gate is swung to the closed position.

The valves are operated by bevel gear reversing mechanism, which allows the operator to either close or open the valves in the gates by throwing the shipping lever which engages a jaw clutch with one of the bevels required to operate the valve stem

in the desired direction. The travel of this stem, however, is limited by an automatic stop consisting of a loop and bell crank, operated by a pin in the cross-head travelling with the valve stem so that at the lower or upper limit of travel, the pin trips the bell crank connecting with the shipping lever so as to throw the clutch out of engagement with the bevel gear which produces the motion.

The weir gates are operated by worm and segment, or in some cases by raising or lowering the valves in a manner similar to that on the lock gates, the operation of which is carried out in much the same way as described in connection with the gates.

As there are a number of weir gates or valves which must be capable of independent operation, provision is made by means of a double jaw clutch engaging with either one or the other of two bevelled gears on a horizontal shaft which meshes into a third bevelled gear on a shaft of the worm for operating the segment which drives the valve stems.

A friction clutch is placed between the shaft of the worm wheel driven by the motor, so that in case of accident resulting in jamming any of the parts, the friction clutch will slip before any serious breakage occurs.

The equipment for the bridges is operated by a motor driving the mechanism through worm gears, the same power unit being utilized as for the operation of the lock gates and weirs, an extension of the interchangeable idea. Aside from the first speed reduction, however, the gearing is quite different, though in the case of both the Mille Roches and Stormont bridges the arrangement is worked out on similar lines.

The bridge at Mille Roches has a motor swung under the bridge just outside of the turntable, being counter-balanced by weights at the opposite end of the bridge. I-beams support the motor and worm gear case, the shaft of which drives the gearing communicating the motion to a pinion meshing with the rack which turns the bridge.

A friction clutch communicates the power from the motor driven worm shaft to one or the other of a pair of bevels turning the bridge in whichever direction the operator desires. The clutches are operated by two removable levers coming up through the bridge floor.

The control of the Stormont bridge is very similar to that of the Mille Roches bridge, the only difference in the mechanism being that the power unit is mounted inside the drum of the turn-table on I-beam frame, which does not require to be balanced.

During the year a contract was entered into with Mr. M. P. Davis to complete the electrical working equipment of the canal by putting a winch at each lock for pulling vessels into the lock. The progress of the work under this contract has been delayed somewhat owing to the difficulty in securing the electric motors on time, but the work will be completed during the present season.

A contract was also entered into with Mr. J. C. Johnstone, Cornwall, for repairing the north bank from the east end of the revetment wall to old lock 17. During the two weeks that the water was out of this level in the spring the base of the wall for a distance of about 650 feet was put in and the wall built up from water level after May 1. There remains about 750 feet of this wall to build yet.

To prepare old locks 15, 16, 17, 18, 19 and 20 for the electric equipment it was necessary to lengthen the lifting rods, and widen the foot bridges. This was done and the machinery installed.

All the new locks were supplied with new chains for hauling the gates; and the old chains repaired were put on the old lock gates.

Another 500 feet was added to the new rip-rap on the north side of the canal on the high bank at Robertson's culvert, above lock 19. This was put in, using a heavier class of stone than had generally been adopted in the past. In many places along the south bank in short stretches of 50 to 100 feet the stone protection was renewed.

All gates, bridges and machinery were painted during the season.

The masonry on both sides at the west end of lock 17 was repaired, replacing seven stones in the coping, re-setting the others and putting in a concrete backing, finishing

it off on the surface as a walk. This concrete backing at locks 15 and 17 has been found very effective in withstanding the impact of heavy vessels. In no case where it has been put in have the coping stones been shoved in. To prevent, as far as possible, chipping of the coping oak waling—strips were placed at each end of lock 15 on both sides, and at the upper end of lock 17 on both sides.

The slope on the high bank above lock 21 is in a condition requiring repairs every spring. It would appear as if it should be completely under-drained to prevent the slides that occur. Long stretches of it have had to be filled in during the present year; a similar slide occurred last year.

A beginning was made in putting in iron snubbing posts by placing two at lock 19 late in 1903. Others will be put in as the wooden posts now in position require to be replaced.

Two were also placed on the north side of lock 21.

In order to have a covering for the lock machinery that has to be taken off old locks 15 and 16 every winter to avoid damage by flood, an old building that stood near the upper dam was taken and repaired for a storehouse and placed on the north bank of the old canal at old lock 16.

This winter the heaviest ice jam occurred farther up the river than usual. The channel was filled with ice from about a mile below the foot of the canal to the head of Barnhart's island, raising the water so high that for a short time the Long Sault rapids were flowing level and the waters of the river running over the lock gates at the head of the canal.

While the canal was unwatered in the spring of 1904, all the stone protection was carefully gone over and repaired, in addition to the piece at Robertson's culvert that was renewed.

All the ditches along the south side of the canal have been carefully gone over and cleaned out.

The bridge across the Canadian Coloured Cotton Mill Company's flume, above lock 17, has been renewed, using timbers and plank.

Three anchor-bars on the gates of old lock 15 were broken by the ice during the winter. They have been replaced so that the lock is in condition for use, if the necessity arises.

The gate pontoon has been thoroughly overhauled and strengthened; but it is in bad condition, nearly all the frame work being well rotted.

All the old gates and barges left lying in the upper reaches of the canal have now been cleaned out.

Considerable work was done in cleaning up the bank at Mille Roches and in trimming the point, just above the Mille Roches bridge.

About 100 trees, mostly maple, elm, birch and willow, were planted on the south side at the head of the canal. They are growing nicely.

Plans have been prepared for workshops and office, and tenders for their erection are being called for.

In addition, all the work of small repairs was carefully attended to as the occasion arose. Repairing broken chains, patching broken gate bridges, repairing a broken part of machinery are matters each one small in itself, but when they occur day by day and perhaps several times in one day at one point or another it becomes a matter of some moment in the amount of time occupied in making the repairs.

THE WILLIAMSBURG CANALS,

comprising the Farran's Point, Rapide Plat and Galops canals, were all closed on December 3, 1903, and opened to navigation on May 1, 1904.

The only interruptions to navigation were at Farran's Point from 6 a.m., August 22, to 6 a.m., August 25, caused by the steam barge *Erin* sinking in the lock, and at the Galops canal from 8.30 a.m., November 21, to 10.50 a.m., November 23, caused by having lowered the water in the canal owing to a leak discovered in the bank. At

Farran's Point all vessels drawing 9 feet, or under, used the old lock, so that only two vessels suffered detention by the accident—*John Crerar* and *Geo. C. Howe*. At the Galops there were only three vessels detained.—*D. D. Calvin, S. N. Parent* and *Neepawa*.

To mark clearly the projecting point where the old outer pier formerly showed at the lower entrance to the Farran's Point canal a red light was placed upon it.

Considerable work was done in puting back into position riprap stones that had become displaced on the Iroquois section of the Galops canal.

A new flooring of white oak was put on both the stationary and the swing bridge at Iroquois.

One house at Iroquois was thoroughly overhauled and repaired, and the one used by the engineering staff for an office was shingled. There are now three government houses at this lock used for the residence of the lockmen.

For almost its full length the south bank of the Rapide Plat canal was gone over and the riprap repaired. This required a large quantity of new stone.

The work of putting in iron snubbing posts in concrete base at new lock 23 was completed, and two put in on the old lock. The concrete backing for the lock and wing walls was also completed, and now that lock is in such good condition that it should require no attention for many years outside of the little accidents that may happen any time, and keeping it painted and clean.

All the residences, lock-houses and other structures requiring it were painted during the year.

At Farran's Point there was over a mile of the canal reserve lands that had not been fenced in. This was inclosed by a heavy post and wire fence, with gates put in at such points as they were likely to be required.

The pier at the northeast entrance to the Farran's Point canal was extensively damaged by one of the large freight steamers running into it. This damage was repaired, and the pier is now in as good condition as formerly.

Very complete soundings and surveys of the river in the vicinity of the lower entrance of the Farran's Point canal were made during the latter part of the season of 1903. These were plotted and a chart prepared. Afterwards a model of the river was cut out in wood and the direction and effect of the currents carefully watched. Much valuable information was obtained, which, it is expected, will be useful in overcoming the difficulties of navigation at that point.

A rather heavy cave-in occurred in the south bank of the Galops canal near the west end of the Iroquois section late in November, 1903. The water was lowered and the cave-in filled up.

The cribs put into this bank during the construction of the Junction canal have been left there, and now, from the heavier head of water and from muskrat invasion, are a source of trouble. Considerable repairs had to be done again in the spring of 1904. Where the bank was widened and the crib taken out, then the bank built up again, in the spring of 1903, there has been no further difficulty. It would appear as if a similar method of handling would overcome the difficulty at all the points where it exists. It has been decided to adopt this method, and to make the needed repairs without interfering with navigation. A separate appropriation is asked for an amount sufficient to cover this work.

An ice bridge was formed between Baker's Point and Croil's island, below Farran's Point canal, early in January; fortunately the water did not rise high enough to do any damage.

The mechanics and a few of the labourers on the repair staff were employed during part of the winter in building a new working scow and house boat for the repair staff. The scow is 24 ft. x 70 ft. x 7 ft., of British Columbia fir, and has been made exceedingly strong, as it is intended to put on a derrick operated by steam power. The living quarters is a very comfortable float 16 ft. x 34 ft., affording good sleeping and eating quarters for a dozen men.

During the winter season about 100 cords of heavy boulders were placed as a talus on the outer side of the bank of the Galops canal, on the Iroquois section, between stations 80 and 90.

In the spring of 1904, 15 snubbing posts had to be renewed at the head of the Galops canal.

All the ditches on the Redmond and Hanes farms on the north side of the Galops canal were cleaned out, and both of them extended in a westerly and southerly direction. There should be no further complaints of water lying on their property from either of these men.

A very considerable portion of the stone protection that was put in on the back ditch runs through the village of Iroquois, fell in and will have to be renewed. This will be done with a larger stone laid with a greater slope.

Nearly two miles of wire fence were built along the north side of the Galops canal.

About 200 native trees were planted on the outer bank of the Faran's Point canal this spring. Most of them are growing well.

On all the canals the grass and weeds were kept cut and the banks in good condition.

A contract was entered into with the Acetylene Construction Company of St. Catharines for installing the complete plant for lighting Farran's Point canal by acetylene gas. The work is well under way and will be finished in a month or so.

THE MURRAY CANAL

was closed on November 30, 1903, and opened to navigation on April 25, 1904.

There was no interruption to navigation during the season.

All the ditches were cleaned, grass and weeds cut, and several rather heavy wash-outs repaired by filling in. In order to avoid these wash-outs in the spring several of the ditches have been deepened and carried into the canal through a large tile running under the tow path.

The house purchased from C. Goodrich was repaired at a rather considerable cost, though nothing more was done than was needed. It is used as a residence by the bridgemaster on the Smithfield bridge.

The wooden piers of the C. O. R. bridge were rebuilt from below the water line, so that now all the bridge piers are in good condition. As nothing had been done to them or to the end piers since they were first built, it has been a matter of considerable cost to rebuild them.

The land pier on the north side of the eastern entrance was built up of concrete, making a substantial structure that will not require repairs. An iron snubbing post was put in, and steel girders to carry the flooring across to the next crib. Owing to lack of appliances for making and handling concrete work the work took somewhat longer than it will to do the remaining piers with machinery.

The piers are all very far gone and must be replaced at as early a date as possible.

All along the line of canal on both sides the stone protection was kept in good condition by constant work.

Numerous complaints came in from the owners of side-wheel steamers that their paddles were being broken by striking on the floats placed along each side of the bridge pits. These floats were taken out and walings placed on the side of the masonry, which serve the purpose of the floats in protecting the piers and abutments, and do not injure the vessels.

Contracts were entered into with the McGregor-Banwell Fence Company for wire fencing; Mr. T. D. Sandford for cedar fence posts, and with Mr. Norman Button for erecting the fence along both sides of the canal. Good progress has been made with each contract, and the fence is completed except at a few points where the high water prevents access at this season of the year.

The house owned by Mr. W. H. Johnston, near the C. O. R. bridge, has been purchased, and will be used as a residence by the bridgemaster at that bridge.

Statements are appended showing the water levels, traffic reports and fines and damages.

I have the honour, to be, sir,
Your obedient servant.

W. A. STEWART,
Superintendent of Operation.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

STATEMENT of fines and damages in connection with the St. Lawrence Canals during the year ending June 30, 1904.

CORNWALL CANAL.

Lock.	Date.	Name of Vessel.	Damage.	Fine.	Name of Owner.	Remarks.
	1901.		$ cts.	$ cts.		
17	July 31..	Hebron.	1,427 69	....	Hall Forwarding Co... ..	Unpaid.
	1902.					
20	July 19..	....		5 00	L. A. Ross.	Paid.
20	Aug. 12..	....		20 00	"	"
	1903.					
18	June 18..	Bothnia	9 79	.....	Tontreal Transportation Co.	"
18	" 18..	Bohemian	13 88	.. ....	R. & O. Navigation Co.....	"
21	Oct. 17..	A. M. Marshall. ..	60 00	.....	Great Lakes and St. Lawrence Transportation Co	"
17	" 11..	Geo. C. Howe..	45 00	....	" " ..	"
	1904.					
21	May 27..	J. H. Plummer.....	12 00	....	R. O. McKay.....	"
19	June 13..	Turrett Chief.	20 00	.....	Peterson Co	Unpaid.

WILLIAMSBURG CANALS.

	1903.					
22	July 16..	Barge Doris	100 00	....	Can. Towage and Transp. Co.	Paid.
22	Oct. 16..	H. B. Dalton... ...	40 00	. .....	G. L. and St. Lawrence Transportation Co..	"
22	" 31..	J. S. Keefe.....	690 42	.. . ...	" " ..	"

MURRAY CANAL.

Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.

W. A. STEWART,
Superintendent of Operation.

MORRISBURG, Ont., June 30, 1904.

RECORD of Highest and Lowest Levels of Water on the St. Lawrence Canals for the Year ending June 30th, 1903.

MONTH.	CORNWALL CANAL				WILLIAMSBURG CANALS.												MURRAY CANAL.			
	Lock 15.		Lock 21.		Lock 22.		Lock 23.		Lock 24.		Lock 25.		Lock 27.							
	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.						
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.						
1903.																				
July	10 8	10 4	11 0	10 3	10 5	9 6	10 0	9 3	10 3	9 6	12 11	12 1	10 7	9 10	14 0	13 8				
August	20 7	10 2	10 9	9 10	10 3	9 1	9 9	8 8	10 4	9 0	12 9	11 3	10 4	9 3	14 0	13 5				
September	10 3	9 10	10 4	10 0	9 8	9 2	9 5	8 9	9 8	9 1	12 2	11 6	10 4	9 5	13 7	13 0				
October	10 5	9 6	10 1	9 4	9 4	8 5	9 1	7 10	9 6	8 0	11 10	10 3	9 10	8 9	13 4	12 5				
November	9 7	8 9	9 7	8 4	9 9	7 9	8 2	6 9	9 0	7 0	11 2	8 11	9 8	7 11	13 0	12 1				
December	18 11	8 7	9 9	8 4	9 5	7 8	8 5	6 4	8 9	6 9	11 1	8 6	9 6	8 0	12 8	12 3				
1904.																				
January	22 0	17 8	10 6	8 0	12 0	8 0	9 8	6 0	7 7	6 0	9 8	6 8	8 10	8 1	12 3	11 11				
February	26 0	21 2	13 2	9 0	13 3	10 0	9 8	7 2	7 7	6 3	9 10	8 2	8 8	7 11	12 5	12 1				
March	24 3	20 1	10 0	8 10	11 1	9 9	9 3	7 3	8 8	6 8	10 10	8 6	9 5	8 3	13 7	12 5				
April	22 0	10 7	11 2	9 5	10 6	9 7	10 0	8 6	10 1	8 7	12 11	11 0	11 2	9 5	14 9	13 10				
May	11 1	10 8	11 5	10 8	10 9	10 0	10 10	9 9	11 1	10 2	14 0	12 8	11 6	10 8	15 2	11 8				
June	11 4	10 10	11 7	11 0	11 11	10 4	10 9	10 1	11 5	10 3	13 11	12 11	11 8	10 11	15 5	11 11				

MORRISBURG, June 30, 1904.

W. A. STEWART,
Superintendent of Operation.

SUMMARY of Traffic through the St. Lawrence Canals, during the Season of 1903.

REVENUE DIVISION.	Passes issued and seen.	Grain, &c., on which Tolls were paid here, transhipped at			Through Traffic to Quebec.			Number of Vessels passed through.						Registered Tonnage of Vessels passed through.					
		Kingston.	Prescott.	Ogdensburg.	Wheat.	Flour.	Coal.	Cornwall.	Farran's Point.	Rapide Plat.	Galops	Lift Lock.	Murray.	Cornwall.	Farran's Point.	Rapide Plat.	Galops.	Lift Rock.	Murray.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	No.	No.	No.	No.	No.	No.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Cornwall	2,582	.....	.....	31,231	12,889	17,904	21,325	5,105	.....	.....	.....	.....	.....	1,163,502	.....	.....	.....	.....	.....
Cardinal	763	2,910	.....	9,893	.....	.....	.....	.....	1,116	1,645	3,126	1,985	.....	.....	470,684	532,432	644,932	526,108	.....
Kingston	404	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brighton	742	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	742	.....	.....	.....	.....	.....	242,485

W. A. STEWART,
Superintendent of Operation.

MORRISBURG, June 3, 1904.

HARBOUR IMPROVEMENTS,
PORT COLBORNE, ONT.
August 4, 1904.

DEAR SIR,—I have the honour to submit my annual report on the progress of the works for the improvement of the Port Colborne entrance, Welland canal.

The contract for these works was let to Messrs. M. J. Hogan and Allan R. Macdonell, May 4, 1900. They comprise ; first, the dredging and cleaning up the bottom of the canal basin and entrance channel to a depth of 16 feet at low water, and the construction of docking along the sides of the basin. Second, the excavation in solid rock of a wide channel 22 feet in depth from deep water in the lake to the lighthouse situated 2,000 feet from the shore line, on the southern end of the west pier, and the construction at this point of two elevator docks. The total estimated cost of these improvements as provided for under this contract at schedule rates is $1,031,189.

The present condition of the works may be briefly described as follows : First, the improvements of the canal basin and entrance channel, north of the lighthouse on the end of the west pier are approximately one half completed. The total value of this part of the improvements is about $360,652. As directed by your letter of April 25, 1904, the 950 lineal feet of docking on the east side of the canal basin south of the Grand Trunk elevator is being sunk to 22 feet in depth, the building of the cribs for this section of docking is now in progress. Second, the excavation of a wide channel 22 feet in depth from deep water in the lake, necessitating the removal of over 200,000 cubic yards of rock and the construction of the elevator docks is well advanced towards completion. The value of this section of the improvements is about $670,537. There yet remains about 80,000 cubic yards of rock to excavate of which quantity 50,000 cubic yards are drilled and blasted. The cribwork and concrete superstructure of the two elevator docks are completed, except one crib in each dock not yet sunk in place. The filling or hearting of these docks in rear of the lines of cribwork requires 180,000 cubic yards of loose rock, of which quantity 100,000 cubic yards have been put in place. This filling has been somewhat delayed pending the construction of elevator foundations.

The value of the work done and material delivered to July 31, 1904, is $715,311.75, or about 70 p.c. of the estomated cost of the work at contract rates. The approximate quantities of the chief items of work done to the above date are as follows :

Item 1.	Excavation in canal basin (principally earth) to afford 16 feet of water	C. yds.	69,960
" 2.	Excavation south of canal entrance (principally rock) to afford 22 feet of water	C. yds.	132,500
" 2b.	Drilled and blasted but not dredged	C. yds.	47,900
" 4.	White pine in cribs 12 x 12	L. ft.	17,800
" 5.	Hemlock in cribs 12 x 12	L. ft.	489,986
" 6.	White pine in cribs, 6 x 12	L. ft.	4,900
" 7	Hemlock in cribs 6 x 12	L. ft.	39,846
" 11.	Iron in screw bolts of cribs	Lbs.	377,500
" 12.	Iron in drift bolts of cribs	Lbs.	687,000
" 13.	Spikes in cribs	Lbs.	26,700
" 14.	Crib filling	C. yds.	104,469
" 15.	Concrete in blocks	C. yds.	5,814
" 16.	Concrete in mass form	C. yds.	12,354
" 17.	Oak waling	M. ft. B.M.	85
" 18.	Cast iron mooring posts	Lbs.	34,400
" 19.	Wrought iron anchor rods of mooring posts	Lbs.	13,440
Special stone filling and ballast		C. yds.	7,600
"	Macadam	C. yds.	1,600
"	Stone filling behind cribs	C. yds.	6,850

During the past year the contractors have added to their plant, a large and powerful dredge with steel hull, which together with their other dredge, drill boat, tugs, &c., makes one of the best and most modern submarine excavation plants in Canadian waters. With the plant now on hand the completion next season of this contract is practically ensured.

The Department of Public Works, with a view of assisting in the development of trade through the canals and the formation of a well protected harbour here, have recently completed a breakwater across the southwest face of the harbour, this structure is 4,500 feet long and situated in the lake about 1,650 feet south of the new docks. In order to afford protection from easterly storms, the Public Works Department are now building a breakwater 2,400 feet long, and beginning 600 feet from the eastern end of the present breakwater. These structures when finally completed will fully protect the harbour and head of the canal from all storms.

The Royal Commission on transportation visited the works on May 3 last, and after a careful inspection of them, accompanied by Mr. J. L. Weller, suptg. engineer, Welland canal, Mr. Louis Coste, resident engineer, Department of Public Works, and myself, they held a meeting in this office to hear evidence in reference to the works now under contract and contemplated for the improvement of the Welland canal and Port Colborne harbour. The subject of putting in suitable foundations and constructing elevators of a most modern type and required capacity, on the new docks was discussed at some length, together with the question of rail connection out to the docks.

The rebuilding of the present west pier, an obvious necessity at an early date on account of its advanced stage of decay was also discussed on the lines of doing so to a depth of 22 feet. When this pier is rebuilt, I most strongly recommend that it be carried down to a depth of 22 feet, so that when the deep water channel at some future time is extended northward into the canal basin, the pier for a length of about 2,700 feet could then be used by vessels drawing 20 feet.

I am, sir, your obedient servant,

ALEX. J. GRANT.
Engineer in Charge.

COLLINGWOOD SCHREIBER, Esq., C. M. G.,
Chief Engineer Railways and Canals,
Ottawa, Ont.

WELLAND CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
ST. CATHARINES, July 1, 1904

SIR,—I have the honour to report upon the maintenance and operation of the Welland canal and its branches for the fiscal year ending June 30, 1904.

The canal was closed December 12, 1903, and opened for navigation May 2, 1904.

The different works which have been designed to facilitate navigation through the canal have been carried on satisfactorily during the past year.

Messrs. Magann & Phin, under contract for deepening portions of the Summit Level, have completed the deepening from Allanburg to Welland and are now working between Welland and Humberstone.

Messrs Hogan & Macdonell, under contract for deepening the rock cut between Port Colborne and Humberstone, have done considerable work, but have not yet completed their contract.

The substructures for two new bridges, one at Welland and one at Port Robinson have been built, under contract, by Mr. Joseph Battle during the fall and winter. Steel superstructures for these have been erected by the Hamilton Bridge Works Company, the channel arms spanning the deep water in the canal and giving a clear channel 100 feet in width. The location of both of these bridges has been changed, the new bridges now being on the locations formerly occupied by the original bridges built about 1829, when the first Welland canal was put through. The change of location was much desired by the residents of Welland and Port Robinson and is greatly appreciated.

The substructures of the old bridges were removed by Messrs. Magann & Phin under contract. This contract also called for the entire removal of the 'Quaker bridge,' between Welland and Port Robinson. The removal of this bridge was made possible by the department buying all the land between the canal and Welland river from Port Robinson to Welland, about 180 acres. The navigation through the canal is very much improved by the removal of this bridge and the cost has been much less than if a new bridge had been built.

Before the opening of navigation this spring the mitre sills of the guard gate on the summit level above lock No. 25 were lowered two feet, the work being done by the canal staff at a cost of $9,300.

The lock at Port Maitland, which has been leaking badly for some years, has been unwatered, two heavy dams being required, and the foundation is now being repaired.

Slow progress is being made on the installation of an electric light and power system along the canal. The poles are nearly all in position and considerable wire and other material is on hand, but it will be late in the season before the lights will be in use. Power is to be obtained from the Lincoln Electric Light & Power Company of St. Catharines, who have contracted to deliver power, from DeCew Falls into the distribution station, which is to be built on the canal bank at Thorold, the department distributing the power along the canal as they may require.

In my last report I stated that 'the canal was beginning to show signs of age, and from this on considerable trouble may be expected from leaks in banks, washing out of foundations, &c.' This prediction is unfortunately being fulfilled, as last fall a settlement in the bank in rear of the north wall of Lock No. 15 showed plainly that there was something wrong with the foundations, and preparations were made to repair them before the opening of navigation this spring. In the early spring a similar settlement occurred in rear of the wall of Lock No. 16. Upon unwatering this spring, it

was found that the upper mitre sill of each lock was very badly undermined as well as portions of the walls near the Hollow Quoins. They were so serious that I was obliged to entirely replace the upper sill of Lock No. 15, and should have done the same to Lock No. 16, but the time at my disposal was too limited. Temporary repairs were made to lock No. 16, which it is hoped will carry over till next spring, when it is proposed to entirely renew the whole foundation of locks 15 and 16 and also No. 12, which is also considerably undermined. Several weir foundations are more or less undermined and will require attention.

Advantage was taken of the water being out of lock 16 to clean off the top of the road tunnel under the canal, and plaster it with mortar. This has stopped the leaks which have been a source of annoyance to parties using the tunnel.

OLD CANAL.

The water was not drawn off the canal this spring, as it was considered that the extensive repairs made last year put every thing below water in safe condition for the next two or three years.

There has always been trouble at lock No. 2 during the spring freshets, as the waste weirs had not sufficient capacity to pass the water and ice which came down. To relieve them a large concrete spillway was built in the canal bank during the fall of 1903. This answered every purpose intended during the freshets this spring and saved serious trouble, as the freshets were of unusual magnitude.

A large quantity of rip-rap has been placed along the canal banks during the year.

Several of the locks and a portion of No. 2 level has been cleaned out with a clam shell dredge worked by the canal staff.

GENERAL.

The gate yard at Port Dalhousie is being fitted up in a more modern way than formerly and work will now be done to much better advantage. A new roof has been placed on the main building.

The water in Lakes Erie and Ontario has been exceptionally high during the last half of the year.

The following employees have been superannuated during the year:—Mich. McCarthy, John Paxton, Edward McLaughlin, Bart. O'Leary.

The following superannuated employees died during the year:—John Corbett, at Thorold, December 27, 1903; James Foster, at Welland, February 26, 1904; James McCoppen, at Port Colborne, March 21, 1904; Samuel Duffin, at Port Dalhousie, April 23, 1904, and Henry Hare, at Merritton, May 20, 1904.

Attached is a statement of fines collected for breaches of canal rules and regulations. Also a statement showing the highest and lowest recorded depths of water on the mitre sills of the locks at Port Dalhousie and Port Colborne for each month of the year.

I have the honour to be, sir,

Your obedient servant,

J. L. WELLER,
Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

SESSIONAL PAPER No. 20

STATEMENT of fines collected from steamers contravening canal rules and regulations, and locktenders for dereliction of duty during the fiscal year ending June 30, 1904.

Date of Fine.	Name of Steamer.	Amount of Fine.		Date paid.	Where Paid.
		Paid.	Unpaid.		Collector's Office.
1903.		$ cts.	$ cts.	1903.	
June 8	Str. 'Turret Cape'	5 00		July 9	Port Dalhousie.
July 3	" 'F. H. Prince'	2 00		" 24	"
	Locktenders.				
1904.				1904.	
Feb. 18	J. M. Woodall	10 00		Feb. 18	St. Catharines.

STATEMENT showing the highest and lowest depths of water on the lower mitre sill, lock No. 1, New Welland canal, Port Dalhousie, for the fiscal year ending June 30, 1904.

Months.	Lower Sill.				Months.	Lower Sill.			
	Highest.		Lowest.			Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	1904.	Ft.	In.	Ft.	In.
July	16	8	16	2	January	14	9	14	5
August	16	9	16	0	February	15	2	14	6
September	16	10	15	4	March	16	2	15	0
October	15	9	15	4	April	17	4	16	1
November	15	8	15	0	May	17	9	17	1
December	15	5	14	8	June	18	0	17	8

STATEMENT showing the highest and lowest depths of water on the upper mitre sill, lock No. 27, New Welland canal, Port Colborne, for the fiscal year ending June 30, 1904.

Months.	Upper Sill.				Months.	Upper Sill.			
	Highest.		Lowest.			Highest.		Lowest.	
1903.	Ft.	In.	Ft.	In.	1904.	Ft.	In.	Ft.	In.
July	15	7	15	0	January	14	7	12	5
August	15	8	14	3	February	13	10	12	8
September	15	8	14	4	March	14	11	13	4
October	15	6	14	1	April	16	9	15	1
November	15	5	13	11	May	15	11	15	3
December	15	10	13	7	June	16	2	15	7

ENGINEER'S OFFICE,
SAULT STE. MARIE, ONT., August 3, 1904.

SIR,—I have the honour to submit my annual report on the improvements in progress to the entrances to the Sault Ste. Marie canal.

DREDGING UPPER ENTRANCE.

A contract for deepening and widening the most westerly section of the improvement work outlined to the upper channel way was entered into on November 17, 1903, with Mr. John Hickler and Mr. Henry Hickler.

The contract embraces the removal of six shoals, containing about 42,000 cubic yards, and the removal of all boulders, to a depth of 21 feet 5 inches below extreme low water mark, and lying within the limits laid down for the deepening and widening of the channel. The progress of the work was much retarded by the stormy weather of the autumn of 1903, and by the late opening of navigation in the spring of 1904. From these causes, the contractor was unable to complete his contract in the specified time; upon an application he secured an extension to September 30, 1904, which will provide ample time to complete the work.

These shoals have been a menace to navigation during the periods of the season when fog and snow flurries are prevalent, lying as they do between the turning buoy to the Canadian channnel and the northern limit of the American canal approach.

The remaining sections comprise the deepening and widening of the present channelway from a width of 250 feet to a width of 500 feet through the Vidal shoals, narrowing down on the bend in the vicinity of the canal beacon to a width of 250 feet at the entrance piers, and securing a depth of 21 feet 5 inches below extreme low water mark. When this remaining work has been completed, a channel way will have been secured more in keeping with the large freighters now using it, which have more or less difficulty in passing each other at the present time with safety. The increased depth will provide the same depth of water as is secured on the upper mitre sill of the lock.

SURVEY OF DUMP GROUND.

During the winter season of 1903-4 a survey was made by sounding in the bay above Moore's Point at the upper entrance to provide sufficient dumping ground for the material to be removed in the deepening and widening. A good location was secured, which has since been buoyed out and is now in use.

EXTENSION TO THE SOUTH PIER, UPPER ENTRANCE.

An extension to the upper entrance pier has also been provided for in the improvement work outlined. It is proposed to extend the present pier 800 feet, which will provide better accommodation for vessels waiting for delayed orders, and seeking harbour protection in the fall of the year. It will also act as a protection in keeping vessels from being driven on the bank by the strong cross current found at the upper approach.

CHANNEL WAY AT LOWER ENTRANCE.

The channel way at the lower entrance, since being deepened and widened, has provided safe navigation to the vessels using it. No complaints have been made by the captains and owners of vessels of the depth of water provided.

EXTENSION TO THE SOUTH PIER, LOWER ENTRANCE.

A contract for building an extension to the south pier at the lower entrance was entered into February 22 with William Birmingham.

The contract embraces the construction of a substructure of cribwork, 800 feet in length, to within 6 inches of extreme low water mark, and a concrete rear and front wall to the elevation of the coping at the lower level of the lock.

Owing to the late opening of navigation and the difficulty in getting shipment of timber, the contractor was unable to make a start before May 27. Since that date steady progress has been made in the construction of cribwork, and at the present date four cribs have been placed in position and one remains ready to sink. Nothing as yet has been done to the concrete wall, it being necessary first to allow a settlement in the cribwork, before concrete work can be proceeded with.

Stone filling behind the cribs, which has not been provided for, would greatly strengthen the substructure in event of a heavily laden barge striking it with force. The cribwork is sunk from 20 to 22 feet of water, and has only a width of 25 feet.

The extension of the pier will provide accommodation for vessels waiting for their turn for lockage, and also for laying up during the night, when it is dangerous to navigate the river.

I have the honour to be, sir,

Your obedient servant,

F. B. FRIPP.

COLLINGWOOD SCHREIBER, C.M.G.,
Deputy Minister and Chief Engineer,
Ottawa.

SAULT ST. MARIE CANAL.

SUPERINTENDENT'S OFFICE, July 12, 1904.

SIR,—I submit herewith the annual report on the maintenance and operation of this canal for the fiscal year ending June 30, 1904.

The canal was closed for the season on the 13th day of December having been in operation for 256 days and was reopened for traffic on the 30th day of April this year being 28 days later than the season before.

During the fiscal year just ended there were made 2,674 lockages passing through, 3,344 registered craft and 194 unregistered vessels and scows, with a total tonnage of 3,731,320 tons, with an average time of 14·71 minutes to each lockage; of this tonnage 1,418,067 was of Canadian bottoms being a decrease of 57,962 tons under last year in this class of vessels. Owing to the lateness of the opening of the season and the troubles between the Masters and Pilots Association and the Vessel Owners Association of the United States not very many vessels were put into operation until about the first week in June, and it is to these facts that the tonnage of the fiscal year being so much smaller than last year there being a falling off of some 763,988 tons from last year.

The decrease of tonnage passing through the American canal for the same period is something like 9,497,463 tons. The work of extending the south pier at the lower entrance and the widening of the upper approach is now in the hands of the contractors and will be pushed along to an early completion no doubt and will be reported on by the engineer in charge, and when finished will add materially to the usefulness of the canal.

The daily exchange of vessel reports with the American canal officials is still carried on, as in former years thus keeping up the recording of the volume of the Lake Superior traffic which has now assumed tremendous proportions.

As in former years we are very much indebted to Mr. Joseph Ripley the general superintendent of the American canal and his officials for many courtesies shown to us.

The following table gives the traffic passing through the two canals at this point, during the season of navigation for the years mentioned, and shows the increase as being very marked in the last few years.

Year.	Number of Vessels passed.	Registered Tonnage of Vessels.	Total Frieight Tonnage.	Cost of Carrying per mile Ton.	Estimated Value of Freight carried.	Percentage of Freight carried in Canadian Vessels.	Number of Passengers.
1855	193	106,296	14,503	....	.....	.....	4,270
1860	916	403,657	153.721	.....	.....	.....	9,230
1865	997	409,062	181,638	.....	.....	.....	19,777
1870	1,828	690,826	539,883	.....	.....	.....	17,153
1875	2,023	1,259,534	823,465	.....	.....	.....	19,685
1880	3,503	1,734,890	1,321,906	.....	.....	.....	25,766
1885	5,380	3,035,987	3,256,628	....	.....	.....	36,147
1890	10,557	8,454,435	9,041,213	1·3	102,214,948	3·5	24,856
1891	10,191	8,400,685	8,888,759	1·35	128,178,208	4·0	26,190
1892	12,580	10,647,203	11,214,333	1·31	135,117,267	3·8	25,896
1893	12,008	8,949,754	10,796,572	1·1	145,436,957	4·1	18,869
1894	14,491	13,110,366	13,195,860	·99	143,114,503	3·5	27,236
1895	17,956	16,806,781	15,062,580	1·14	159,575,129	3·75	31,656
1896	18,615	17,249,418	16,239,071	1·	195,146,842	3·	37,066
1897	17,171	17,619,933	18,982,755	·83	218,235,927	3·	40,213
1898	17,761	18,622,764	21,234,634	·79	233,069,739	2·2	43,426
1899	20,255	21,958,347	25,255,810	1·5	281,364,750	3·1	49,082
1900	19,452	22,315,834	25,643,073	1·18	267,011,959	3·	58,555
1901	20,041	24,626,976	28,403,065	·99	289,906,865	4·	59,663
1902	22,659	31,955,582	35,961,146	·89	358,306,300	4·	59,377
1903	18,596	27,736,444	34,674,437	·92	349,405,014	6·	55,175

During the season of 1903 the traffic through this canal was 16 per cent of the freight and 58 per cent of the passenger, the amounts being 5,502,185 tons of freight and 32,019 passengers. Compared with the season of 1902 there was an increase of 773,834 tons or 16 per cent ; and a decrease of 4,580 passengers, or 13 per cent.

I would again call attention to the want of a small building for the use of the lockmen whilst on duty. The room in the power house that they have to occupy is not large enough and is needed for the use of the electrician and his assistants.

More of the grounds should be levelled up and trees and shrubs planted to add to the beauty of the place.

The necessary repairs have been made to the buildings and machinery to keep up their efficiency.

Cement sidewalks should be built to replace the wooden ones now in use they having lived out their usefulness.

No damage has been done to the gates or piers by vessels using the canal.

I am, sir, your obedient servant,

J. C. BOYD,
Superintendent.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Railways and Canals,
Ottawa.

TRENT CANAL.

SUPERINTENDENT ENGINEER'S OFFICE,
PETERBORO, August 6, 1904.

SIR,—I have the honour to submit my annual report for the fiscal year ending June 30, 1904, on the works under my charge known as the Trent Canal. This is a term applied to the several works constructed to improve navigation, together with the several navigable reaches between the town of Trenton, on Lake Ontario and Georgian Bay on Lake Huron.

The object of the works is to connect the several stretches. When the present contracts are completed there will only remain three more comparatively inexpensive stretches of canal to construct in order to complete the whole of this land-locked waterway from Lake Huron to Lake Ontario.

A glance at the map of this district will show at once the great length of natural navigable reaches compared to the length of artificial navigable reaches required to connect them. Wherever possible advantage has been taken of utilizing the bed of the fine rivers which follow the course of this waterway for its entire length. By utilizing the beds of the lakes and rivers a comparatively cheap mode of construction is employed, while the cost of future maintenance will be reduced to a minimum. The Imperial government as far back as the year 1835, chose this route as being the most natural and feasible to make a water communication between Lake Ontario and Lake Huron, and they spent considerable sums in carrying out the project, and in fact a sufficient sum of money was voted by the government at that time to construct that part of the work lying between Lake Ontario and Balsam lake. The works then constructed have ever since been used for local traffic.

When the two divisions at present under construction are completed, a continuous line of navigation between Heeley's Falls and the ports on Lake Simcoe, a distance of about 160 miles, will then be available. Though a draught of six feet is provided on all the sills, the land necessary to flood for a draught of eight feet has been purchased on the new sections at present under construction, so that if required a draught of eight feet could be provided at comparatively little extra cost by raising the water level two feet.

Owing to the fact that this waterway is also used by the lumbermen to float their logs down stream to their mills, and many of the reaches which are now opened up for navigation, have heretofore been used exclusively by the lumbermen for the floating of their logs, brings a new condition of things into existence, and some means will have to be adopted to meet this changed condition. It has heretofore been the custom of lumbermen to allow water-soaked logs to remain in the channel after the rest of the drive had passed on. This is a most dangerous practice and is a great menace to navigation. Some of these water-soaked logs lie in the navigation channel with one end on the bottom and the other end a few inches above the surface of the water. At night it is impossible to see the tops of these logs, and several accidents have occurred by vessels striking these logs, in some cases the logs have passed through the planking of the vessel.

MAINTENANCE.

Navigation closed on November 18, 1903, and opened again on April 30, 1904.

The height of the water on the mitre sills of all the locks was very fair throughout the season with the exception of the lower sill of the lock at Peterborough. The water

level on the lower sill of this lock, during the period of low water, has been much reduced owing to the shoal at 'Yankee Bonnet' being dredged out. This will necessitate the lowering of the lower mitre sill and also of the bottom of this lock for a depth of three feet. An appropriation has been made for this purpose and the work will be done during the present year.

The regulation of the water at the present time is under three managements, namely, the Dominion Government, the Ontario Government and the lumbermen, consequently it is not surprising that there are complaints regarding the management of the water during the dry seasons. Owing to the immense country drained and the country every year becoming more cleared, the proper regulation of the water becomes less under control on account of the water running off so suddenly during the spring, and there being no dams to conserve it. Negotiations between the Ontario Government and the Dominion Government are at present under way for the transference of the several dams (over fifty in number) from the Ontario Government to the Dominion Government. These dams control the water to a certain extent in the north country, and it is proposed to extend this system for the benefit of navigation of the whole canal. The regulation also of the water between Lakefield and Peterborough is, under the present circumstances, very unsatisfactory, and as the power at the several dams along the river is developed, the trouble will be increased. Owing to the mills at Young's Point and Lakefield using all the surplus water, any temporary stoppage almost stops the entire flow; in consequence the mills below are often stopped for a time. If the power owners at Lakefield and other dams were to notify the government caretakers of the dams, or otherwise compensate for the stoppage by allowing extra water to escape, when it is necessary to stop temporarily for repairs, the cause of the complaint would be removed.

With reference to the water supply, it is not generally known that such a vast system of reservoirs exists as there are in the country to the north of the direct route of the canal. From a recent survey of these reservoirs, it was ascertained that there are over fifty dams at present constructed, which control about 70,000 acres of water, in which over 25 billion cubic feet of water can be stored, not taking into account the large quantity that could be stored by many new dams that could be constructed. The proper storing and regulation of the large quantity of water above referred to is a most important matter, not only to navigation, but to the vast commercial interests that are located along the valley of the Trent. The traffic on this waterway has nearly doubled during the last ten years; the total number of lockages ten years ago was only 2,500, now the lockages total 5,442, being an increase of 143 over those of last year. This does not fairly represent the traffic on the canal, as owing to many of the longer routes of the steamers not passing through a lock, no record of the traffic is kept. There are over 30 steamers engaged in commerce between Lakefield and Balsam lake, besides a large number of small steamers belonging to private individuals.

There are seven steamers on the reach between Peterborough and Heeley's Falls, and several on Lake Simcoe. Many of the larger steamers are of considerable size some of them carrying as many as 450 passengers.

REPAIRS.

The following repairs were made :—

ROSEDALE.

Guide booms were placed at the swing bridge.

FENELON FALLS.

The new pattern of valves were placed in the centre gates and three top bars of the gates, which were rotten, were replaced with new timbers. The lower entrance pier on

the north side, which was of timber, had become decayed, was replaced with a concrete pier 200 feet in length.

BOBCAYGEON.

The lock-gates were temporarily repaired. These will be replaced with new gates during the present year.

Boulders were removed from the lower entrance to the lock, which has much improved the channel.

BUCKHORN.

The upper entrance pier, which had been removed by the ice, was replaced by a concrete pier. Repairs were also made to the sluices, and the north end of the flat dam, which was partially burnt, when the mill was burnt, was replaced.

LOVESICK.

New stop log gains in the timber slide and two of the sluices were put in. New timbers were also put on some of the piers. The platform over the dam was also panked.

BURLEIGH.

The glance booms were repaired and new stop-log gains were put in the timber slide. The cast-iron casings of the quoin posts were repacked with oak.

YOUNG'S POINT.

The tops of the piers and the platform and platform timbers of this dam, which had become very decayed, were renewed. New stop-log gains were placed in several of the sluices.

LAKEFIELD.

The dam at this station, which was built about the same time as that at Young's Point, was repaired in the same way as the dam at that place. The whole of the sheeting on the upper face of the dam was renewed. The filling in front of the dam and the sheeting was removed and replaced by means of a diver, and considerable time was required to complete this work.

All these old timber dams should have the piers of the sluices, which have become decayed, replaced with concrete piers, and it is the intention to follow out this mode of repair as required.

PETERBOROUGH.

New upper lock-gates were built and minor repairs made to the old gates.

PAINTING STRUCTURES.

The bridges, lock-gates and guard railings to bridges, wailing timbers, &c., from Peterborough to No. 3 lock, were painted. The work is being continued this year.

BUOYING OUT.

The buoys along the navigation channels were repainted and new buoys were placed where required.

REPAIRS TO PLANT.

The tug *Empire,* which was built some seventeen years ago, had considerable repairs made to it. New side plank and new bracing were put in the dredge *Trent* and the whole hull re-caulked. The hull of the dredge *Otonabee,* which has become almost beyond repair, was strengthened in the way of bracing, &c., to do for another season. A new hull has been built, and it will be put in commission next season.

CLEARING.

The work of clearing and underbrushing the canal lands, along the river between Nassau and Lakefield, has been continued.

Income.

PETERBOROUGH.

The old cribwork of the old entrance pier on the south-east side was removed and replaced by 450 feet in length of concrete entrance pier.

The contract for the construction of the new dam was taken out of the contractor's hands, and is being completed by day work.

BURLEIGH.

A new concrete entrance pier 225 feet in length has been constructed on the north-east entrance to the lock at Burleigh.

LOVESICK.

One hundred and seventy-five feet of new concrete entrance pier was constructed at the north-east entrance to the lock.

DREDGING.

The work of dredging the shoals between Lakefield and Buckhorn, and between Peterborough and Heeley's Falls, was proceeded with during the season.

ROAD CONSTRUCTION.

Part of the grant towards the construction of a road between Lindsay and Fenelon Falls was expended in the way of timber bridge piers, but as the municipalities refused to grant any contribution towards the construction of this road the balance of the grant was unexpended.

Capital.

Hydraulic Lock No. 1.

The banks of the hydraulic lock, at Peterborough, were left in an unfinished state by the contractors, in order that they might be allowed to settle before the sod was placed on them. The contract for the sodding of these banks was let to Mr. David Conroy, and was completed in a most satisfactory manner.

Protection lining along the west bank of the canal, from the hydraulic lock to the Norwood Road bridge, was constructed, where it was not put on by the contractors. The grounds about the hydraulic lock were levelled off, when the sidings and contrac-

tor's plants were removed. The bottom of the prism between the entrance piers of the hydraulic lock was floored with a foot of concrete.

The following work about the hydraulic lock, which was not included in the Dominion Bridge Company contract, was completed:—

Cabins over central tower and spiral stairway, doors, windows, iron grills for openings on the side of the driveway, railings on walls and stairways and spiral stairway. The foundation of the lockmaster's house was completed.

The steelwork of this lock has been completed, and the lock is open for traffic.

Guard Rail.

Guard railings along the Portage Road and the tenth concession road, in the township of Eldon, where they run through the flooded parts of the land, were constructed.

Construction.

Section No. 1, Simcoe-Balsam Lake Division.—The work on this section, as was mentioned in my last report, has been completed.

Section No. 2, Simcoe-Balsam Lake Division.—The contract for the construction of this section was awarded to Messrs. Larkin & Sangster, on September, 1900. The work on this section is almost completed, and it is expected that by the end of the present season the whole work will be fully completed.

The masonry and substructure for hydraulic lock No. 2 is comprised in this contract and has been completed, ready for the steelwork of the lock—the plans for which are now being prepared.

Section No. 3, Simcoe-Balsam Lake Division.—The work on this section is well advanced. The concrete of locks No. 1, 2, 3 and 5 is completed. Dam No. 1 is completed, and No. 2 and 3 are completed, with the exception of the closing gaps. The upper and lower entrance piers to the canal at Lake Simcoe are yet to construct.

There is considerable earthwork yet to do—this will be for the most part dredging.

The swing bridges at the Portage Road, Centre Road and River Road have been completed. This section will not be completed before the middle of next season.

Plant.

The dredge *Otonabee* has been employed continually throughout the season. During July and August she was dredging the channel at the lower entrance to the lock at Young's Point. During the balance of last season, and up to June 30 last, she was dredging the shoals in Katchawannoe lake.

The dredge *Trent* has been loaned to the Department of Public Works for the purpose of deepening the river channel up to and in front of the Cereal Company's Works, at Peterborough, in order to allow barges to ascend and load at the mill.

The tug *Empire* has been fully employed throughout the season in hauling scows of dredged material from the dredge, buoying out and snagging the navigation channel, delivering stone, timber, gravel, &c., for the various works of repair along the route, besides the use for inspection by the staff officials.

I am, sir, your obedient servant,

RICHARD B. ROGERS, M.I.C.E.,
Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Chief Engineer and Deputy Minister,
Department of Railways and Canals,
Ottawa, Ont.

RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
OTTAWA, July 2, 1904.

SIR,—I have the honour to submit herewith my annual report on the Rideau canal, under my charge, for the fiscal year ending June 30, 1904.

Navigation closed at Ottawa, November 24, 1903.

Navigation closed at Kingston Mills, November 16, 1903.

Navigation opened at Ottawa, May 2, 1904.

Navigation opened at Kingston Mills, May 2, 1904.

The depth of water maintained in the various levels throughout the whole season of navigation was excellent, no trouble or delay on account of low water for navigation having occurred anywhere, although our reservoir for the Tay branch of this canal, Bob's lake, was run down so low as to cause inconvenience to the electric light plant in the town of Perth during the past winter.

The spring freshet this year was, I regret to say, the most disastrous one for our works that we have had for many years, not on account of the height of water, for it has often been as high and even higher, but the weather kept so cold that the ice when it broke up came down on our works as firm and solid as when it was formed; and at Poonamalie the retaining dam was partially carried away from this cause, as will be detailed hereafter.

Other damage was done at various points, which will be specified under the various localities.

The principal works and repairs executed along the line of the canal are as follows:—

OTTAWA.

One new pair of lock gates and four new sluice frames were put in here. Considerable repairs were made to the planking of the basin wharfs, and also to the roadway in rear of the same.

The lockhouse was painted inside and cleaned, as was the office of the collector of tolls.

A large number of boulders were removed from the basin this spring and sundry small repairs made to the station generally.

STEWARTON BRIDGE.

Sundry small repairs were made to the bridge, and to the bridge-keeper's house.

BANK STREET BRIDGE.

Sundry small repairs were made to the bridge, and to the approaches thereto.

CONCESSION STREET BRIDGE.

This is an entirely new bridge, which was built last winter across Mutchmor's cut on the line of Concession street in the city of Ottawa.

The masonry abutments and roadway and approaches were built by contract with Mr. Thomas McLaughlin, of Ottawa, and the steel swing superstructure by contract

with the Dominion Bridge Company, of Montreal. The whole work has been satisfactorily executed, and the bridge, which is the class I type, is solid and substantial.

A small cottage for the bridge-keeper is now being built.

HARTWELL'S.

The whole of the old stone waste weir was taken down last winter, together with the upper wing wall of the upper lock on the east side, as far around as the hollow quoin, and rebuilt by our own masons.

This old masonry was in a dangerous state, the coping in some places overhanging 18 inches.

The new waste weir is of a different pattern from the old one, consisting now of two masonry abutments, with 12 foot stop-logs between. Sundry small repairs were made to the tow-path road, and portions of the bank were faced with stone to break the wash of the boats when passing.

The lock-house, although in a fair state of repair, appears to be in an unsanitary condition, as it is damp all the year round; so much so that paper will not stay on the walls, &c.

I have reported to you on this subject separately, and my report also applies to the lock-house at Hogsback.

These cottages are all of the same pattern, being square stone structures of one story only, and although everything has been done to keep them dry that can be suggested, yet they appear to be still damp and unhealthy; and repairs to them only seem to be a waste of money, as they are over 70 years old.

HOGSBACK.

The old wooden swing bridge across the upper lock, and a new steel span substituted therefor, by contract with the Hamilton Bridge Works Company, and the approaches thereto, were built and graded up by our own men. The lower wing wall of the lock on the west side is in a bad condition, and arrangements are being made to rebuild it next winter, and the stone for this purpose is now being cut in Elgin quarry by our own masons.

Sundry small repairs were made to the dam and to the tow-path road, and also to the station generally.

BLACK RAPIDS.

A new pair of lock-gates were put in here last winter. The hollow quoin coping of the lower gate on the east side is broken, but the new stones are now on the ground, and will be put in this year.

LONG ISLAND.

A large amount of work was done at this station during the last year. The large stop-log bulkheads at the locks, and also at the back channel in the village of Manotick, were taken down and rebuilt by our repairs gang. The middle piers of the locks were grouted up, and considerable leakage stopped thereby. Small repairs were made to the lock-house and to the station generally.

MANOTICK BRIDGE.

No repairs were necessary here, except raising the swing span, which was bearing too heavily on the trucks.

WELLINGTON BRIDGE.

The swing span was raised a little, and some of the timbers on the upstream sides of the piers, which were broken by the ice last spring, were repaired.

BECKETT'S LANDING BRIDGE.

No repairs were required here last year.

BURRITT'S RAPIDS.

Sundry small repairs to the station and embankments generally were made, and small repairs to the swing bridge. The ice during the freshet damaged the ice breaker in front of the waste weir, and also on the far side of the long dam. Arrangements have been made to have these repaired this coming winter.

NICHOLSON'S.

Sundry small repairs were made to the station generally.

CLOWS.

The protection crib on the south side of the lock was raised and some more stone placed therein. During the freshet the stop logs were kept in the weir to save the lock bank from the rush of water and ice. The flat dam is long enough to allow of this being done without raising the water to any appreciable extent. Some stones were carried out of the dam during the freshet ; but they are large and heavy, and can be recovered when the water lowers, and replaced.

MERRICKVILLE.

The lower wing walls of the middle lock was taken down and rebuilt by our own masons ; and a new pair of lock gates put in by our carpenters ; and sundry small repairs made to the station in general. The north bulkhead of the waste weir, was damaged by ice during the late freshet ; but it is safe enough for the present season of navigation, and will be repaired, together with the back of the flat dam, this year. Some damage was done to the roadway leading to the north pier of the Snye bridge, and also to private property in the village, during the late freshet. These damages, it is claimed, resulted from the breaking of our dam at Poonamalie, and various claims were filed against the department in this connection; which claims, I understand, are now before the department.

KILMARNOCK.

Sundry small repairs were made to the swing bridge and to the station generally. The swing bridge will be rebuilt this coming winter. The bridge crossing the bulkhead was damaged by ice during the late freshet; quite a number of the timbers of the crib piers being broken. However arrangements are being made to repair this damage at the present time ; and the crossing is perfectly safe. The Back dam is also in need of repairs ; and the timber for this is delivered on the ground.

EDMOND'S.

Small repairs were made to the upper sill, and to the station generally. The masonry of the waste weir and of the upper wing wall on the north side, is in bad condi-

tion, and will be rebuilt this coming winter. The ice damaged the wing walls of the waste weir considerably, and carried out some stones from the top of the dam. The lock-house is in bad condition, and the back walls are in such a shape as to necessitate their being taken down and rebuilt.

OLD SLY'S.

The waste weir bridge was damaged by ice during the freshet ; but repairs have been made thereto. A new boom was placed in front of the waste weir, and was of great use holding back the ice during the late freshet. The lay by piers at the head of the locks, require to be rebuilt, and this will be done this winter.

SMITH'S FALLS, COMBINED.

Sundry small repairs were made to the station generally. The long wooden bridge leading to Jason island, will be replaced with a steel structure on masonry piers, this summer. Considerable damage was done to private property in the town during the late freshet ; which it is claimed was the result of the breaking of Poonamalie dam, three miles above the town. Claims for compensation for the same, have been made, and are now, I believe, before the department. No damage worth mentioning, was done to our works during the freshet. The two abutments of the swing bridge across the upper lock, which are of timber, are to be rebuilt of masonry this winter, and the stone for this is being cut in Elgin quarry, as is also the stone for the new bridge to Jason island.

SMITH'S FALLS DETACHED.

The upper wing walls and sill of this lock, are in bad condition, and will be taken down next winter and rebuilt : the stone for this purpose is now being cut in Elgin quarry. The Lombardy road embankment was slightly damaged during the freshet, after the breaking of Poonamalie dam : but by watching it day and night, until the water receded, nothing serious resulted, and the damage has been repaired.

POONAMALIE.

As mentioned in the commencement of this report, a serious break occurred in the dam here during the late freshet, when about 175 feet of the timber flat dam were carried out by ice ; but as stated in my reports to you on this subject, in April last, we regained control of the water in a week ; and in less than three weeks, had the dam rebuilt temporarily on the same line as the old one ; without any loss of water or delay to navigation whatever.

The repairs however, are only temporary ; as a new concrete dam is to be built below the present one : arrangements to do which, are now being made.

It is on account of the breaking of this dam, that the claims for compensation, before mentioned, have been made to the department from Smith's Falls and Merrickville.

A new cottage was built for the lock labourer here ; and a large shed for storing the cement for the new dam, has been built : the material in which after the dam is built, will be utilized to build a new storehouse at the lock, as the present one requires to be replaced.

BEVERIDGE'S.

Sundry small repairs were made to the station in general. The ice during the freshet, broke the centre bent of the bulkhead of the retaining dam ; but this has been temporarily repaired, and the whole bulkhead will be rebuilt this coming winter.

PERTH.

Sundry small repairs were made to some of the culverts in the tow path road, and also to the wharves and bridges. The four bridges are now being painted by the bridge men.

BOB'S LAKE DAM.

This dam, which is situated at the outlet of Bob's lake, about 24 miles above the town of Perth, and which stores the water in the said lake for navigation in the Tay branch of the Rideau canal is to be rebuilt this coming winter.

NARROWS.

Stone facing was placed on the long dam, and the top of the roadway was raised and graded, and sundry small repairs made to the station in general.

NEWBORO.

The high level bridge was replanked, and sundry small repairs made to the station in general. The lockmaster's house is now being repainted.

CHAFFEY'S.

Sundry small repairs were made to the station in general.

DAVIS'S.

Some new wire fencing was put up at this station; and sundry small repairs made to the lock labourers' house and to the station in general. The waste weir is to be rebuilt this winter.

JONES'S FALLS.

The two middle sills of the combined locks were rebuilt by our own masons; and two pairs of lock gates framed and put in by our carpenters. The waste weir was also rebuilt, and sundry small repairs made to the station generally. Arrangements are being made to build the basin dam and weir this winter; and portion of the stone from the old lock sills will be used in this work.

WOLF LAKE DAM.

This dam, which is situated about 10 miles from Newboro, and which creates a reservoir of Wolf lake for the summit level, is to be rebuilt this coming winter.

MORTON DAM.

Sundry small repairs were made to the dam and approaches thereto.

UPPER BREWER'S.

The small bridge across the waste water channel was rebuilt by our own carpenters; and a small office for the lockmaster was built at the head of the upper lock; and small general repairs made to the station.

LOWER BREWER'S.

Some wire fencing was put up around the station; and small repairs made to the lockmaster's house and to the station generally.

KINGSTON MILLS.

A new house has been built here for the lockmaster, as the old one had become uninhabitable. Some stone was placed on the embankments, and small repairs made to the masonry of the locks, and to the station generally. The long wooden bridge was replanked by our own carpenters.

GENERAL.

The pointing and grouting of the lock masonry, and the painting of the wooden structures was done by our own lockmen as usual this spring. The cement for this purpose was purchased by contract with Messrs. Bellhouse, Dillon & Co., of Montreal, the amount purchased being 500 barrels. The dimension timber (Douglas fir) for the lock gates, &c., was purchased by contract with Mr. M. Ryan, of Smith's Falls, the quantity being 154,000 feet B.M. The annual supply of paint, amounting to 4,375 lbs., was purchased by contract with Mr. J. G. Howe, of Ottawa.

DREDGING PLANT.

The dredge 'Rideau' was employed the whole of last season in deepening the cut below the lock at Washburn; and had just reached the lock when she had to cease work for the season. She is now working above the lock deepening the cut between Lower Brewer's and Upper Brewer's lock stations; and is in first rate order.

The tug 'Shanly' was employed as usual in attending to the dredge, delivering stores along the canal, and on inspection work. She was raised this spring and thoroughly overhauled and caulked; but she is getting old, and her frames are decaying Her hull will have to be rebuilt very shortly; and she will require a new boiler.

I append hereto a table showing the highest and lowest water during each month at Ottawa and Kingston Mills lock stations, during the past year. I would draw your attention to the fact that Lake Ontario is higher this year than it has been for many years, as shown by the readings on our guage on the lower sill at Kingston Mills.

I have the honour to be, sir, your obedient servant,

ARTHUR T. PHILLIPS, M.C.S.CE.,
Superintending Engineer.

COLLINGWOOD SCHREIBER, ESQ., C.M.G.,
Chief Engineer Canals,
Ottawa.

SESSIONAL PAPER No. 20

RIDEAU CANAL.

Table showing monthly, the highest and lowest water on the lower mitre sills of Locks Nos. 1 and 47, at Ottawa and Kingston Mills lock stations, respectively, from July 1, 1903, to June 30, 1904.

Ottawa, Lock No. 1.						Kingston Mills, Lock No. 47.					
Highest.			Lowest.			Highest.			Lowest.		
	Ft.	In.		Ft.	In.		Ft.	In.		Ft.	In.
July 3-4	16	4	July 31	11	0	July 13-20	8	10	July 31	8	8
Aug. 1	10	10	Aug. 26-29	9	2	Aug. 1-4	8	8	Aug. 28-31	8	4
Sept. 27-28	10	1	Sept. 15-17	8	1	Sept. 1-4	8	4	Sept. 23-30	8	1
Oct. 22	11	3	Oct. 5-7	9	4	Oct. 18-31	8	3	Oct. 1-9	8	1
Nov. 1-2	10	0	Nov. 27-30	8	8	Nov. 1	8	3	Nov. 28-30	7	5
Dec. 1-4	8	8	Dec. 24-31	8	5	Dec. 1-2	7	5	Dec. 28-31	6	7
Jan. 1-11	8	4	Jan. 12-31	8	3	Jan. 1-17	6	7	Jan. 18-31	6	6
Feb. 1-19	8	3	Feb. 20-29	8	2	Feb. 1-8	6	6	Jan. 26-29	6	3
Mar. 31	11	11	Mar. 1-7	8	2	Mar. 30-31	8	0	Mar. 1-2	6	3
April 11	18	10	April 1	12	3	April 30	9	4	April 1	8	0
May 9-12	23	6	May 1	17	6	May 5-31	9	5	May 1-4	9	4
June 11-12	23	6	June 30	16	10	June 23-30	10	0	June 1-2	9	5

ARTHUR T. PHILLIPS,
Superintending Engineer.

Rideau Canal Office. July 2nd, 1904.

Department of Railways and Canals,
Canals Revenue Branch,
Canal Office, St. Peters, June 30, 1904.

Sir,—I have the honour to submit my annual report on work and operation on St. Peters canal, under my charge, during the fiscal year ending June 30, 1904.

There has not been any repairing done to the canal the past year outside of minor repairs such as was required for the operation of the canal, the shimming up of three of the tracks by marine divers, and rearing four new chains on lock gates, &c.

The canal will require inside of six months a new swing bridge, as the one that is now in use is getting very bad. It is in use some twenty-four years, and shows signs of sagging on turn table. The bridge is a wooden one, and has served its time, and I would suggest that a good iron bridge be built and placed at as short a time as possible.

The government fence leading from the main road north entrance canal down to the warehouse south entrance will have to be thoroughly repaired, and a new fence built from the warehouse leading west northwest, a distance of 175 yards. This last mentioned fence should be built at once, as the one that is now in use is good for nothing.

The lock-house will require some small repairs, as well as painting.

The government warehouse floor has sagged down; the pillars and posts underneath have given away, and will have to be raised up with jack-screws.

The dredging at north entrance and at south entrance is still undone, and should be attended to as soon as a dredge boat can be secured.

The canal is in very good condition, and the operating in first-class condition.

Navigation and traffic on canal is up to the general standard. Navigation opened on St. Peters canal April 15, 1903, and closed on December 31, 1903. During that time 1,719 steamers and vessels passed up and down the canal.

There is one tidal lock and four pair of gates on St. Peters canal.

I have the honour to be, sir,

Your obedient servant,

JNO. H. DEVEREUX,
Lockmaster.

Collingwood Schreiber, Esq., C.M.G.,
Chief Engineer and Deputy Minister,
Railways and Canals,
Ottawa, Ont.

THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The report of the secretary of the Railway Committee of the Privy Council, herewith, enumerates the cases which were before the committee during the four months from October 1, 1903, to February 1, 1904 (when the Railway Act, 1903, became operative). Within the period above named there were five meetings of the Railway Committee of the Privy Council as follows:—

October 31, 1903, November 10, 1903, December 1, 1903, January 9, 1904, and January 25, 1904.

The character of the business before them was :—

1. For permission to make highway crossings over railways.
2. For permission for one railway to cross another.
3. For permission for one railway to form a junction with another.
4. For permission for railways to cross and run along streets and highways.
5. For approval of plan and proposed site of bridges over navigable water.
6. For permission to use crossings and junctions before installation of interlocking appliances.
7. For permission to construct branch lines.
8. For protection of streets and highways crossed by railways.
9. For running powers of one railway over another.
10. For permission to change location of sections of railways.
11. For permission to close streets and highways and to divert them.

The matters submitted to the committee during the said period from October 1, 1903, to February 1, 1904, and the decisions arrived at are as follows:—

1. Application of the Winnipeg Street Railway Company for permission to cross, at rail level, the Canadian Pacific Railway at Main street and Higgins avenue, in the city of Winnipeg.—Under consideration.

2. Application of the Corporation of the city of Toronto for an Order authorizing the construction and maintenance of a street by means of an overhead bridge, east of and immediately adjoining York street, across the tracks of the Grand Trunk and Canadian Pacific Railway Companies in the city of Toronto.—Under consideration.

3. Application of the Niagara, St. Catharines and Toronto Railway Company for permission to intersect and unite with the Wabash Company's line which the latter have leased from the Grand Trunk Railway Company.—Under consideration.

4. Application of the Canadian Pacific Railway Company for approval of plan and profile of proposed crossing of Main street and Maple street, in the city of Winnipeg.—Under consideration.

5. Application of the Municipal Corporation of the village of Dutton for permission to open up across the lands of the Canadian Southern Railway and the Lake Erie and Detroit River Railway a highway known as Charles street, and to extend Nancy street and the said Charles street across the tracks of the said railway companies.—Under consideration.

6. Application of the Canadian Pacific Railway Company for use of tracks and facilities at Central station, Ottawa, for through as well as terminal purposes.—Under consideration.

7. Application of the Ottawa, Northern and Western Railway Company to the Committee to determine the terms and conditions on which it may use, for railway purposes (jointly with all parties entitled to use the same), the passenger station and passenger tracks and approaches in connection therewith, situate on ordnance lands of the Crown near Sapper's bridge, Ottawa.—Under consideration.

8. Application of the Pontiac Pacific Junction Railway Company to the Committee to determine the terms and conditions on which it may use, for railway purposes (jointly with all parties entitled to use the same), the passenger station and passenger tracks and approaches in connection therewith, situate on ordnance lands of the Crown near Sapper's bridge, Ottawa.—Under consideration.

9. Application of the Ottawa, Northern and Western Railway Company for approval of the place and mode of junction of its railway with the Canada Atlantic Railway near Sapper's bridge, Ottawa.—Under consideration.

10. Application of the Canadian Northern Railway Company for approval of the place and mode of crossing by its railway of the Canadian Pacific Railway on Point Douglas avenue, Winnipeg.—Under consideration.

11. Application of the Algoma Central and Hudson Bay Railway Company for approval of plans and profiles of its proposed crossings of the Canadian Pacific Railway at Sault Ste. Marie, Ontario.—Under consideration.

12. Application of the Municipal Council of the county of Richmond, in the province of Quebec, for an Order directing that a public highway may be constructed across the track of the Grand Trunk Railway Company, at rail level, as shown on plan submitted.—Under consideration.

13. Application of the Bay of Quinté Railway Company for approval of the place and mode of crossing, at rail level, by its railway of the Grand Trunk Railway at Napanee station.—Approved.

14. Application of the International Transit Company for approval of the place and mode of crossing by its railway of the Canadian Pacific Railway in the town of Sault Ste. Marie.—Interim order granted.

15. Application of the Niagara, St. Catharines and Toronto Railway Company for approval of plan and profile of its proposed extension in the city of St. Catharines, running along Ontario street from King street to junction with the main line to Port Dalhousie.—Under consideration.

16. Application of the Canadian Pacific Railway Company for authority to carry a portion of the highway between concessions 2 and 3 of the township of London, over its railway by an overhead bridge, and to divert a portion of the said highway, and to expropriate from lot 22 the land necessary for that purpose, as well as authority to close up a portion of the original highway, when so diverted, and to take down and to remove the present overhead wooden bridge.—Under consideration.

17. Application by the town of Whitby for an Order directing that protection be provided at certain highway crossings of the Grand Trunk Railway.—Under consideration.

18. Application of the Corporation of the city of Ottawa for an Order directing the widening of the bridge on Somerset street, over the tracks of the Canada Atlantic and Canadian Pacific Railway Companies, as shown on plan submitted.—Under consideration.

19. Application of the Corporation of the city of Ottawa and the county of Carleton for an Order directing the removal by the Canadian Pacific Railway Company of the earth embankment constituting the eastern approach of the railway bridge over the Rideau river at New Edinburgh, and the substitution therefor of a bridge having a clear span of 150 feet, and also the restoration of the island at this point to its original condition.—Under consideration.

20. Application of the Mabou and Gulf Railway Company for approval of the place and mode of junction of its railway with the Intercolonial Railway, as shown on the plan submitted.—Under consideration.

21. Application of the Mabou and Gulf Railway Company for approval of the place and mode of crossing by its railway of the Cape Breton Railway, as shown on the plan submitted.—Under consideration.

22. Application of the Canadian Pacific Railway Company for an Order approving of the construction of Beatty street across the tracks of the Canadian Pacific Railway Company, in the city of Vancouver.—Approved.

23. Application of the Mabou and Gulf Railway Company for approval of the place and mode of crossing by its railway of the Inverness Railway and Coal Company's line at Hillsborough, N.S., as shown on plan submitted.—Under consideration.

24. Application of the Canadian Northern Railway Company for approval of the place and mode of crossing by its railway of the Brookdale branch of the Canadian Pacific Railway, in Manitoba.—Granted.

25. Application of the Canadian Pacific Railway Company for permission to cross 1st and 18th streets in the city of Brandon.—Under consideration.

26. Application of the British Columbia government for approval of revised location of its line of railway from Fraser river bridge easterly to the junction of the Vancouver, Westminster and Yukon Railway, also for permission to remove the track of the British Columbia Electric Railway Company, as shown on plans submitted.—Granted.

27. Application of the Vancouver, Westminster and Yukon Railway Company for a right of way over and through lot No. 1, Sapperton, B.C., owned by the Canadian Pacific Railway Company.—Granted.

28. Complaint of the town of Toronto Junction, *re* refusal of the Grand Trunk Railway Company to provide necessary siding facilities to the Union stock yards at Toronto Junction, for the purpose of unloading live stock consigned to that place.—Withdrawn.

29. Application of the Vancouver and Lulu Island Railway Company for permission to cross certain streets in Vancouver.—Under consideration.

30. Complaint of Mr. Joseph James that the proposed location of the Bay of Quinté Railway Company's line between Bridgewater and Queensborough will run through his mining property, being part of lots 2 and 3, concession 4, township of Elzear, county of Hastings, which will injuriously affect and damage his mining rights and privileges, and applies for an Order limiting and defining the operations and works of said railway, &c., &c.—Under consideration.

31. Application of the village of Hastings that protection be provided by placing a watchman or otherwise at the crossing of the Grand Trunk Railway in the said village.—Under consideration.

32. Application of the Corporation of the city of Vancouver for an Order directing that gates be erected and maintained by the Canadian Pacific Railway Company at its crossing of Granville street at the present time, and that an overhead bridge be erected by the said railway company, when in the opinion of this Committee it becomes necessary, owing to increase in traffic.—Under consideration.

33. Application of the Corporation of the city of Chatham for a hearing under section 3, chapter 69, 2 Edward VII, *re* the erection and establishing workshops, &c., in said city of Chatham by the Lake Erie and Detroit River Railway Company.—Under consideration.

34. Application of the city of St. Thomas for an Order permitting the electric cars of the St. Thomas Street Railway to cross the tracks of the Canadian Southern Railway, at rail level, at William and Elgin streets, and for a further Order com-

pelling the Canada Southern Railway Company to construct a subway on Ross street, in that city.—Under consideration.

35. Application of the village of Weyburn, N.W.T., for permission to extend Third street across the Canadian Pacific Railway.—Under consideration.

36. Application of the Vancouver, Westminster and Yukon Railway Company for approval of the place and mode of crossing by its railway, of the Canadian Pacific Railway near Heatley avenue, in the city of Vancouver.—Approved.

37. Application of the Vancouver, Westminster and Yukon Railway Company for approval of the place and mode of crossing by its railway of the British Columbia Electric Railway on Venables and Powell streets, in the city of Vancouver.—Approved.

38. Application of the Winnipeg Street Railway Company for approval of the place and mode of crossing by its railway of the Canadian Pacific Railway on Portage avenue west in the city of Winnipeg.—Under consideration.

39. Application of the Canadian Pacific Railway Company for approval of the construction of the Princess branch in the city of Winnipeg.

40. Application of the Lindsay, Bobcaygeon and Pontypool Railway Company for approval of change in the location of its line in the township of Verulam.—Approved.

41. Application of the Lindsay, Bobcaygeon and Pontypool Railway Company for approval of plan and proposed site of a bridge to be built by that company across Emily creek.

42. Application of the Lindsay, Bobcaygeon and Pontypool Railway Company for approval of changes in the location of its line in the townships of Manvers and Cartwright.

43. Application of the Grand Valley Railway Company for approval of the place and mode of crossing, by means of an overhead bridge, by its railway of the Grand Trunk Railway.—Approved.

44. Application of the Lindsay, Bobcaygeon and Pontypool Railway Company for approval of the place and mode of crossing by its railway of the Grand Trunk Railway in the town of Lindsay.—Approved.

45. Application of the Corporation of the City of Ottawa for an order directing the construction by the Canada Atlantic Railway Company of a subway under its tracks on Bank street and apportioning the cost between the Canada Atlantic Railway Company and the Ottawa Electric Street Railway Company.—Under consideration.

46. Application of the Grand Trunk Railway Company for approval of plans and profiles of its highway crossings on its branch line to the city of Brantford.—Approved.

47. Application of the Canadian Pacific Railway Company for approval of the construction of a branch line to the premises of James Turner & Company, in the city of Calgary.—Approved.

48. Application of the Canadian Pacific Railway Company for approval of the construction of a branch line to the premises of the Western Packing Company in the city of Winnipeg.—Approved.

49. Application of the Canadian Northern Railway Company for approval of the place and mode of crossing by its railway of the Pembina branch of the Canadian Pacific Railway near Homefield station.—Interim Order.

50. Application of the Canadian Pacific Railway Company for approval of the construction of a branch line to the premises of Swanson and Patterson, in the city of Winnipeg.—Approved.

51. Application of the Corporation of the City of Toronto for permission to lay and maintain a line of water pipes under the tracks of the Grand Trunk Railway Company.—Granted.

52. Application of the Grand Trunk Railway Company for approval of the construction of a branch line to the premises of the Kemp Manufacturing Company, in the city of Toronto.—Approved.

53. Application of the Chateauguay and Northern Railway Company for approval of the place and mode of crossing by its railway of the track of the tramway of the Rev. Sisters of Providence at Longue Pointe.—Approved.

54. Application of the Canadian Pacific Railway Company for approval of the construction of a branch line from its main line crossing Pacific avenue to the premises of A. Y. Griffin and Company in the city of Calgary.—Approved.

55. Application of the Grand Trunk Railway Company for approval of plans and profiles of each highway crossing, 10 in all, on the diversion of its line between Port Hope and Newtonville.—Under consideration.

56. Application of the Compagnie du Chemin de fer de Colonisation du Nord for approval of plan and site of a proposed bridge to be constructed by the company across the Nominingue river.—Approved.

57. Application of the Bay of Quinté Railway Company for approval of the and mode of crossing, at rail level, by its railway of the tracks of the Canadian Pacific Railway in the village of Tweed.—Approved.

58. Application of the Canadian Northern Railway Company for approval of the place and mode of crossing, at rail level, by its railway of the tracks of the Pembina branch of the Canadian Pacific Railway near Holmfield station.—Approved.

59. Application of the Grand Trunk Railway Company of Canada for the approval of the construction of a branch line in the township of Barton.—Approved.

60. Application of the Vancouver, Westminster and Yukon Railway Company for approval of certain changes in the location of its line in the city of Vancouver.—Approved.

COLLINGWOOD SCHREIBER,
Secretary Railway Committee, P.C.

Prepared by

J. W. PUGSLEY,
Clerk of the Railway Committee, P.C.

PART II

STATEMENTS OF THE ACCOUNTANT

No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals, Dominion of Canada, during the Fiscal Year ended June 30, 1904.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	
			Staff.	Repairs.
CANALS.	$ cts.	$ cts.	$ cts.	$ cts.
Beauharnois			9,236 27	11,936 37
Carillon		9,150 07	16,224 94	17,262 29
Grenville				
Chambly		26,701 59	21,544 69	25,656 00
Cornwall	113,795 16	1,730 16	45,792 64	20,932 55
Culbute		2,204 50		
Lachine	181,487 06	162,705 14	77,233 17	50,660 92
Lake St. Louis	7,916 90			
Lake St. Francis		2,199 52		
Murray	750 00	2,521 13	5,291 43	6,075 94
Rideau		13,525 04	39,127 96	38,496 78
Sault Ste. Marie	32,029 54		14,653 35	9,491 44
Soulanges	113,328 45	15,608 69	25,235 25	39,382 01
Ste. Anne's			2,292 94	2,244 13
St. Lawrence—North Channel	68,595 42			
St. Lawrence—Galops Channel	6,450 00			
St. Lawrence—River Reaches	9,634 66			
St. Ours		7,984 41	2,334 67	1,690 61
St. Peter's			3,126 94	122 45
Trent	489,038 44	21,228 55	7,237 05	21,179 12
Welland	555,751 00	31,140 58	91,115 35	85,717 88
Williamsburg—Galops	256,536 30			
Williamsburg—Rapide Plat	26,774 27	1,978 85	20,570 17	19,430 05
Williamsburg—Farran's Point	18,700 00			
Total	1,880,787 20	298,678 23	381,016 82	350,278 54
GENERAL ON CANALS.				
Arbitrations and awards		562 95		
Dredge vessels—Lachine				3,200 64
" Rideau				7,848 72
Miscellaneous			1,470 30	
Salaries and contingencies, canal officers			33,426 29	
Sunday labour			20,121 35	
Surveys and inspections		2,421 38		
Quebec canals survey for boundaries		746 46		
Total		3,730 79	55,017 94	11,049 36
RAILWAYS.				
Canadian Pacific	33,076 39			
Intercolonial	1,880,856 60		7,239,982 04	
National Transcontinental	6,249 40			
Prince Edward Island	698,877 47		335,695 44	
Windsor Branch			24,281 09	
Total	2,619,059 86		7,599,958 57	

STATEMENT showing the amount expended by the Department of Railways and Canals, &c.—*Concluded.*

Name of work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Staff.	Repairs.
GENERAL ON RAILWAYS.	$ cts.	$ cts.	$ cts.	$ cts.
Railway statistics		2,532 84		
Railway subsidies		2,046,878 45		
Repairs to Governor General's car		1,450 60		
Reporting evidence before Railway Committee of the Privy Council		500 00		
Railway Commission		67,101 68		
Subscription to Railway Congress, Brussels		97 33		
Surveys and inspections		13,670 72		
Total		2,132,231 62		
MISCELLANEOUS.				
Cost of litigation		4,770 34		
Salaries of engineers, draughtsmen, &c		28,293 85		
" extra clerks, &c		3,057 80		
Salaries *re* returns to Parliament		140 33		
Total		36,262 32		
RECAPITULATION.				
Total on canals	1,880,787 20	298,678 23	381,016 82	350,278 54
" general		3,730 79	55,017 94	11,049 36
Total on canals	1,880,787 20	302,409 02	436,034 76	361,327 90
Total on railways	2,619,059 86		7,599,958 57	
" general		2,132,231 62		
Total on railways	2,619,059 86	2,132,231 62	7,599,958 57	
Grand total railways and canals, including miscellaneous	4,499,847 06	2,470,902 96	8,035,993 33	361,327 90

Total amount expended, $15,368,071.25.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

No. 2.

STATEMENT showing the amount expended on Construction, Renewals, Ordinary Repairs and Working Staff of the Canals of the Dominion of Canada, up to June 30, 1904.

ST. PETER'S CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	156,523 32	.....	.....	.....
" since "	1868	21,519 72	.....	.....	.....
" " "	1869	70,719 80	.....	.....	.....
" " "	1870	.....	46,193 57	.....	.....
" " "	1871	.....	.....	225 36	555 78
" " "	1872	.....	.....	280 00	6,122 67
" " "	1873	.....	.....	343 32	6,539 58
" " "	1874	.....	.....	725 93	1,558 57
" " "	1875	20 97	.....	560 00	889 35
" " "	1876	11,125 00	.....	641 55	.....
" " "	1877	63,330 18	.....	600 00	17 45
" " "	1878	26,511 51	.....	600 00	.....
" " "	1879	107,337 75	.....	631 50	.....
" " "	1880	80,120 54	.....	400 00	.....
" " "	1881	69,434 76	.....	959 58	.....
" " "	1882	484 00	.....	1,920 54	200 63
" " "	1883	.....	.....	2,089 19	232 42
" " "	1884	2,471 40	.....	2,601 47	367 85
" " "	1885	16,820 15	.....	1,929 11	183 11
" " "	1886	2,316 85	.....	2,360 67	297 81
" " "	1887	1,087 75	750 00	2,777 13	343 23
" " "	1888	.....	.....	3,217 77	1,588 40
" " "	1889	.....	500 00	3,085 29	353 38
" " "	1890	.....	.....	3,110 15	255 34
" " "	1891	972 65	510 53	3,255 30	312 02
" " "	1892	14,387 00	30,936 82	3,007 70	1,461 24
" " "	1893	811 59	9,987 78	2,938 15	1,856 30
" " "	1894	437 05	3,852 21	2,935 94	1,986 70
" " "	1895	868 44	26,222 46	2,499 81	353 55
" " "	1896	1,455 21	16,743 64	2,182 04	260 90
" " "	1897	.....	.....	2,728 38	1 20
" " "	1898	.....	111 70	2,785 25	453 85
" " "	1899	.....	.....	2,819 86	456 61
" " "	1900	.....	.....	2,833 24	1,483 30
" " "	1901	.....	2,311 26	2,730 44	841 63
" " "	1902	.....	10,014 43	2,939 81	274 44
" " "	1903	.....	.....	2,836 49	764 11
" " "	1904	.....	.....	3,126 94	122 45
		648,755 64			
LESS—Refunds of previous years.....	....	208 50			
Total	....	*648,547 14	148,134 40	68,677 91	30,133 27

* Expenditure as above.. .. .. $ 648,547 14
Less expenditure prior to Confederation 156,523 32

Agreeing with Public Accounts, 1904, page 4..... $ 492,023 82

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

BAIE VERTE CANAL.

	Year ending June 30.	Capital.	Income.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		17,929 34
" " "	1872		6,399 41
" " "	1873		14,943 83
" " "	1874		4,018 90
" " "	1875		443 00
" " "	1876		110 75
" " "	1877		22 30
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		520 00
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887		
" " "	1888		
" " "	1889		
" " "	1890		
" " "	1891		
" " "	1892		
" " "	1893		
" " "	1894		
" " "	1895		
" " "	1896		
" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
Total			44,387 53

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

LACHINE CANAL.

——	Year ending June 30.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Expenditure by Imperial Government	....	40,000 00				
Government expenditure prior to Confederation	....	2,547,532 85				
Government expenditure since Confederation	1868			1,852 70	13,742 05	10,431 51
" "	1869	2,000 00			14,209 02	12,085 84
Cost of original construction and enlargement of 1843 to 1848	....		2,589,532 85			
Expenditure by Dominion Government	1870				15,834 49	13,302 39
" "	1871			12,231 40	17,478 52	15,093 25
" "	1872	36,708 15			16,076 93	12,334 69
" "	1873	7,824 28		35,158 21	23,601 03	34,300 60
" "	1874	158,618 35			25,811 07	22,828 66
" "	1875	197,420 52			28,592 01	30,057 34
" "	1876	327,769 39			33,797 73	29,103 65
" "	1877	1,439,375 73			33,148 86	19,824 33
" "	1878	1,484,619 63			39,062 97	13,646 41
" "	1879	958,053 30			42,338 84	12,400 78
" "	1880	369,566 74			38,950 90	10,223 62
" "	1881	292,165 51			39,027 99	19,888 33
" "	1882	252,821 33		2,978 66	41,158 90	17,116 46
" "	1883	396,496 96		1,859 68	45,554 91	18,199 59
" "	1884	188,266 18			48,624 51	19,683 24
" "	1885	111,215 23			49,004 85	20,199 78
" "	1886	210,509 42			50,969 10	19,199 18
" "	1887	28,772 52		12,981 59	53,113 97	22,567 81
" "	1888	19,414 34		7,996 38	52,229 61	19,999 64
" "	1889	76,032 96		972 71	54,110 67	22,957 71
" "	1890	7,448 03		8,238 46	53,114 34	22,999 38
" "	1891	217 53		16,155 75	50,721 69	36,292 98
" "	1892	87,852 35		27,480 80	52,729 37	67,499 62
" "	1893	445,983 21		50,937 40	53,185 00	51,616 79
" "	1894	64,345 14		17,152 48	60,174 03	40,939 70
" "	1895	189,944 36		32,405 20	56,337 44	25,891 45
" "	1896	184,998 25		8,193 15	58,342 96	24,950 20
" "	1897	282,052 48		14,664 21	57,533 20	25,820 73
" "	1898	216,717 44		819 62	57,282 50	33,391 92
" "	1899	162,351 83		3,103 99	55,990 00	35,776 90
" "	1900	125,009 41		12,210 88	56,791 45	31,988 81
" "	1901	97,305 52		12,072 87	58,364 29	50,005 48
" "	1902	113,328 26		36,249 02	59,435 33	45,853 97
" "	1903	58,426 92		109,893 43	69,762 03	53,054 20
" "	1904	181,487 06		162,705 14	77,233 17	50,660 92
Cost of enlargement	....		8,773,118 33			
Total	....		11,362,651 18	588,313 73	1,653,435 73	1,012,187 86

Total expenditure on capital account as above		$ 11,362,651 18
Less charged to St. Lawrence River and Canals, see page 9	$2,950,104 15	
Less expenditure by Imperial Government	40,000 00	
		2,990,104 15
Agreeing with Public Accounts balance sheet, 1904, page 4		$ 8,372,547 03

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

BEAUHARNOIS CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		1,611,424 11			
" since "	1868		63,193 75	9,349 99	6,216 98
" " "	1869		55 00	9,626 99	6,498 57
" " "	1870		27 50	10,117 57	6,384 81
" " "	1871			12,316 53	5,722 36
" " "	1872		27 50	11,792 46	15,733 38
" " "	1873		5,122 50	12,210 73	9,882 06
" " "	1874		26 00	15,392 51	10,990 56
" " "	1875		36 00	14,399 32	12,253 01
" " "	1876			14,465 86	17,170 83
" " "	1877			14,377 63	15,207 36
" " "	1878			14,383 37	9,861 05
" " "	1879			15,015 86	10,370 71
" " "	1880	266 15		15,362 61	8,997 34
" " "	1881			17,659 93	10,770 67
" " "	1882			18,804 53	20,813 86
" " "	1883		6,727 44	18,287 77	15,826 71
" " "	1884		3,277 98	19,107 38	16,232 61
" " "	1885		7,999 79	18,960 40	14,637 70
" " "	1886		8,491 80	19,228 90	14,356 00
" " "	1887		3,633 57	18,867 45	14,999 88
" " "	1888		14,411 97	19,325 05	14,285 98
" " "	1889		10,993 52	20,019 11	14,982 54
" " "	1890			19,847 42	14,999 20
" " "	1891		17,085 68	18,886 86	12,537 39
" " "	1892		1,696 23	20,050 01	14,999 80
" " "	1893			20,348 34	14,107 11
" " "	1894		6,547 72	20,574 53	13,903 46
" " "	1895		27,982 93	20,428 59	12,299 49
" " "	1896			20,725 47	15,050 85
" " "	1897		9,813 15	21,012 64	14,862 98
" " "	1898	25,000 00	5,799 34	20,650 00	16,164 92
" " "	1899		1,000 00	20,613 22	13,463 01
" " "	1900		4,959 22	20,147 59	14,505 30
" " "	1901		483 40	20,118 42	14,199 12
" " "	1902			16,682 52	6,532 33
" " "	1903			8,218 14	10,063 38
" " "	1904			9,236 27	11,936 37
Total		*1,636,690 26	199,391 99	616,611 97	471,819 68

*See page 9 for total cost of St. Lawrence River and Canals.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c. —*Continued.*

ST. LAWRENCE RIVER AND CANALS, SURVEYS, &c.

	Year ending June 30.	Chargeable to Capital.				Chargeable to Income.
		North Channel.	River Reaches.	Galops Channel.	Total.	
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation					18,442 85	98,378 46
Government expenditure since Confederation	1868					
" "	1869					
" "	1870					
" "	1871					
" "	1872					
" "	1873				32,241 69	
" "	1874				26,541 30	
" "	1875				20,611 36	
" "	1876				50,215 47	
" "	1877				47,377 31	
" "	1878				5,570 46	
" "	1879				9,265 77	
" "	1880				9,214 56	
" "	1881				6,927 96	
" "	1882		6,933 45	22,000 00	28,933 45	
" "	1883		3,574 31	41,300 00	44,874 31	
" "	1884		15,546 03	74,300 00	89,846 03	
" "	1885		13,710 17	101,400 00	115,110 17	
" "	1886		16,251 73	99,800 00	116,051 73	
" "	1887		20,037 31	54,400 00	74,437 31	
" "	1888		16,082 85	40,400 00	56,482 85	
" "	1889		1,293 92	17,200 00	18,493 92	
" "	1890		18,279 91	5,700 00	23,979 91	
" "	1891		35,137 25		35,137 25	
" "	1892		59,779 31		59,779 31	
" "	1893		52,643 39		52,643 39	
" "	1894		13,721 66		13,721 66	
" "	1895		1,223 72	181,552 03	182,775 75	
" "	1896		7,457 05		7,457 05	
" "	1897		12,347 31		12,347 31	
" "	1898	171,336 65	7,491 11	32,710 00	211,537 76	
" "	1899	461,979 50	9,366 47	42,430 00	513,775 97	
" "	1900	225,000 00	72,484 41	50,000 00	347,484 41	
" "	1901	184,790 34	19,389 75	91,211 97	295,392 06	
" "	1902	125,000 00	29,268 64	24,037 85	178,306 49	
" "	1903	126,833 94	16,432 28	25,000 00	168,266 22	
" "	1904	68,595 42	9,634 66	6,450 00	84,680 08	
		1,363,535 85	458,086 69	909,891 85	2,958,923 12	98,378 46

ST. LAWRENCE RIVER AND CANALS.

St. Lawrence River and Canals, as above		$ 2,958,923 12
Beauharnois Canal, see page 8		1,636,690 26
Cornwall Canal	12	7,077,094 13
Williamsburg Canal	14	9,869,087 32
Lake St. Louis	10	298,176 11
Soulanges Canal	26	6,851,971 77
Lachine Canal, from prior to Confederation to June 30, 1875, see page 7		2,950,104 15
Lake St. Francis, see page 11		75,906 71
Agreeing with Public Accounts Balance Sheet, 1904, page 4		$ 31,717,953 57

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

LAKE ST. LOUIS.

—	Year ending June 30.	Chargeable to Capital.	Chargeable to Revenue.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" " since "	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
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" " " "	1892		
" " " "	1893		
" " " "	1894		
" " " "	1895	4,753 14	
" " " "	1896	49,909 31	
" " " "	1897	73,300 41	
" " " "	1898	64,495 83	
" " " "	1899	57,607 79	
" " " "	1900	11,765 70	
" " " "	1901	12,918 31	
" " " "	1902	6,000 00	
" " " "	1903	9,508 72	
" " " "	1904	7,916 90	
Total		*298,176 11	

* Included in total cost of St. Lawrence River and Canals, see page 9.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.— *Continued.*

LAKE ST. FRANCIS.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.
		$ cts.	$ cts.
Government expenditure since Confederation	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
" " " "	1874		
" " " "	1875		
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" " " "	1894		
" " " "	1895		
" " " "	1896		
" " " "	1897		
" " " "	1898	3,420 00	
" " " "	1899	23,110 00	
" " " "	1900	15,431 46	12,288 39
" " " "	1901	15,000 00	8,060 30
" " " "	1902	13,945 25	
" " " "	1903	5,000 00	
" " " "	1904		2,199 52
Total		*75,906 71	22,548 21

*Included in total cost of St. Lawrence River and Canals, see page 9.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

CORNWALL CANAL.

—	Year ending June 30	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ ct.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		1,933,152 69				
Government expenditure since Confederation	1868			2,786 00	11,244 47	3,774 18
" "	1869	10,692 04			10,347 91	3,859 14
" "	1870			17,780 05	10,368 16	7,145 42
" "	1871			7 50	11,848 39	8,891 61
" "	1872			10,000 21	10,594 30	8,163 70
" "	1873			1,011 75	13,042 25	12,467 65
" "	1874				13,405 20	7,610 70
" "	1875	1,780 00			13,351 91	7,097 34
Cost of original construction			1,945,624 73			
Expenditure by Dominion Government	1876				13,320 61	6,423 67
" "	1877	49,211 37			13,375 70	6,440 54
" "	1878	145,015 45			13,825 50	4,935 21
" "	1879	143,092 05			13,817 96	4,983 15
" "	1880	109,454 95			14,440 33	9,735 76
" "	1881	53,948 14			15,173 60	5,524 10
" "	1882	44,587 61			15,052 20	6,634 62
" "	1883	21,728 93			18,283 67	8,361 71
" "	1884	22,018 13			18,475 48	9,007 73
" "	1885	62,034 90		16,298 96	15,988 96	12,368 51
" "	1886	57,820 83		6,960 95	15,994 80	11,832 83
" "	1887	46,966 43			17,520 54	12,100 29
" "	1888	67,945 74			16,938 54	13,942 64
" "	1889	163,993 85			17,890 55	58,205 26
" "	1890	365,038 01		2,000 00	17,063 49	12,758 18
" "	1891	599,091 85		1,459 98	16,077 72	9,830 05
" "	1892	398,555 25		2,345 26	15,596 66	9,864 36
" "	1893	352,536 13			15,173 01	9,668 14
" "	1894	404,990 22			15,344 02	7,733 54
" "	1895	450,689 65		21,497 74	15,414 56	13,053 55
" "	1896	448,408 31		2,175 00	15,472 26	25,259 56
" "	1897	438,487 51			15,540 43	16,438 32
" "	1898	133,208 96			15,011 50	15,431 02
" "	1899	37,649 00		15,960 80	16,000 00	14,623 90
" "	1900	169,889 51		18,547 50	18,798 10	13,998 29
" "	1901	62,032 47			17,104 13	15,166 89
" "	1902	90,535 18			17,896 58	15,045 95
" "	1903	77,833 81			70,129 29	19,205 66
" "	1904	113,795 16		1,730 16	45,792 64	20,932 55
Cost of enlargement			5,131,469 40			
Total			*7,077,094 13	120,561 86	640,715 42	446,515 72

* Included in total cost of St. Lawrence River and Canals, see page 9.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

WILLIAMSBURG CANALS.

	Year ended June 30.	Capital.				Renewals Chargeable to Income.	Staff.	Repairs.
		Farran's Point.	Galops.	Rapide Plat.	Total.			
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation being amount of original construction					1,320,655 54			
Government expenditure since Confederation	1868						5,745 97	6,442 41
" " "	1869						5,769 81	5,670 88
" " "	1870						5,573 13	6,546 16
" " "	1871						6,382 17	5,308 41
" " "	1872					1,077 00	5,542 94	3,230 07
" " "	1873						6,424 49	7,347 75
" " "	1874						6,857 19	7,395 92
" " "	1875						6,547 62	4,110 29
" " "	1876						7,418 39	11,690 98
" " "	1877						7,388 68	10,053 61
" " "	1878						7,430 11	4,449 78
" " "	1879						7,517 20	3,549 71
" " "	1880						7,590 15	3,999 77
" " "	1881						7,572 35	5,020 73
" " "	1882						7,589 44	7,447 69
" " "	1883				13 19		7,423 48	7,299 39
" " "	1884				2,473 44		7,757 04	7,349 37
" " "	1885		70,764 07	32,473 05	103,237 12		7,696 67	8,198 03
" " "	1886		78,014 92	71,820 79	149,835 71		7,671 54	7,847 05
" " "	1887		32,862 02	82,990 98	115,853 00		7,635 54	7,904 76
" " "	1888		16,628 95	53,499 34	70,128 29	1,613 67	7,646 79	8,190 13
" " "	1889		37,661 15	22,206 11	59,867 26		7,485 28	8,794 61
" " "	1890		126,417 42	12,660 95	139,078 37		8,954 53	8,191 69
" " "	1891	2,853 76	172,779 88	55,036 96	230,670 60		8,678 25	7,987 40
" " "	1892		218,511 17	158,034 15	376,545 32	797 83	9,158 33	8,551 32
" " "	1893		154,524 01	217,669 28	372,193 29	3,675 00	8,676 03	8,347 97
" " "	1894		223,992 81	274,397 42	498,390 23		10,230 09	7,029 95
" " "	1895		118,464 53	228,892 70	347,357 23	13,720 36	9,675 09	7,371 37
Carried forward		2,853 76	1,250,620 93	1,209,681 73	3,786,298 59	20,883 86	210,337 70	195,327 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

WILLIAMSBURG CANALS—*Continued.*

	Year ending June 30.	Capital.				Renewals Chargeable to Income.	Staff.	Repairs.
		Farran's Point.	Galops.	Rapide Plat.	Total.			
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward		2,853 76	1,250,620 93	1,209,681 73	3,786,298 59	20,883 86	210,337 70	195,327 20
Government expenditure since Confederation	1896	4,980 00	150,744 16	286,396 96	442,121 12	8,607 04	9,588 51	9,036 00
" " "	1897	.....	262,795 78	205,480 55	468,274 33	3,880 76	8,697 54	8,210 71
" " "	1898	231,321 44	734,192 07	116,072 55	1,081,886 06	.....	10,708 66	8,032 84
" " "	1899	346,956 54	987,186 44	57,869 18	1,392,012 16	7,410 00	9,960 64	10,000 00
" " "	1900	100,534 64	752,799 27	14,298 74	867,632 65	4,137 04	11,092 06	10,897 79
" " "	1901	111,158 39	390,112 78	76,501 57	577,772 74	.....	12,342 32	11,755 09
" " "	1902	42,209 89	421,945 81	137,818 22	601,973 92	.....	14,403 28	13,673 26
" " "	1903	10,266 92	320,354 92	18,483 34	349,105 18	.....	15,246 91	20,092 79
" " "	1904	18,700 00	256,536 30	26,774 27	302,010 57	1,978 85	20,570 17	19,430 05
Total		868,981 58	5,527,586 46	2,149,377 11	*9,869,087 32	46,897 55	322,947 79	306,455 73

*Original construction	$ 1,320,655 54
Cost of enlargement	8,548,431 78
Total	$ 9,869,087 32

Included in total cost of St. Lawrence River and Canals, page 9.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENTS howing the amounts expended on Construction, Renewals, &c.—*Continued.*

WELLAND CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government..		222,220 00			
Government expenditure prior to Confederation		7,416,019 83			
" * since "	1868	12,097 84		37,679 05	38,852 96
" " "	1869	43,486 36		39,060 61	50,773 03
" " "	1870		22,173 72	40,340 45	65,009 19
" " "	1871		48,569 10	42,383 33	53,381 02
" " "	1872	53,680 32	6,022 44	37,085 37	50,276 90
" " "	1873	82,282 20	47,876 27	45,382 99	66,550 73
" " "	1874	746,420 61		50,966 48	103,666 99
" " "	1875	1,047,119 91		52,595 00	88,539 99
" " "	1876	1,569,478 19	700 00	57,623 31	81,376 12
" " "	1877	2,199,962 61		59,963 47	49,783 93
" " "	1878	2,138,392 99		60,138 59	66,393 53
" " "	1879	1,552,697 41		59,942 23	56,755 57
" " "	1880	1,252,924 75		63,198 10	76,535 25
" " "	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
" " "	1882	603,402 17	13,664 80	74,641 51	84,374 97
" " "	1883	549,433 29	5,979 03	109,207 21	72,707 62
" " "	1884	432,336 21		113,276 87	90,926 97
" " "	1885	463,505 38	6,150 21	112,670 00	91,534 66
" " "	1886	215,380 75	1,359 00	111,660 22	69,507 48
" " "	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
" " "	1888	429,720 94	10,740 86	110,806 01	86,518 97
" " "	1889	225,910 21	43,803 80	113,587 05	77,547 77
" " "	1890	117,633 22	51,648 28	109,202 02	72,686 19
" " "	1891	36,371 03	19,767 73	107,662 63	82,548 30
" " "	1892	29,541 21	9,008 80	104,673 73	73,771 87
" " "	1893	8,259 94	25,103 13	104,926 73	65,016 84
" " "	1894	1,571 78	13,430 20	102,018 80	53,053 71
" " "	1895	3,809 35	24,245 02	90,438 07	48,270 94
" " "	1896	1,677 67	18,768 99	87,988 11	62,542 64
" " "	1897	2,282 35	22,283 06	88,095 20	41,247 81
" " "	1898		34,803 25	84,806 54	59,571 66
" " "	1899		30,099 84	86,110 88	56,270 60
" " "	1900	18,167 29	37,164 84	84,888 36	59,507 64
" " "	1901	224,536 96	87,777 43	86,889 24	72,055 89
" " "	1902	303,997 81	78,905 37	88,048 95	69,279 90
" " "	1903	315,819 49	94,127 21	90,684 05	72,004 59
" " "	1904	555,751 00	31,140 58	91,115 35	85,717 88
Total		* 25,189,908 31	795,734 82	2,965,526 24	2,541,250 44

*Total expenditure as above	$ 25,189,908 31
Less expenditure by Imperial Government	222,220 00
Agreeing with Public Accounts Balance Sheet, 1904, page 4	$ 24,967,688 31

Original cost of construction, including first enlargement	$ 7,693,824 03
Enlargement, including new Welland Canal	17,496,084 28
Total expenditure as above	$ 25,189,908 31

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

STE. ANNE'S LOCK AND CANAL.

— —	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	1868	134,456 51		778 16	432 47
" since " "	1869			1,062 96	1,873 51
" " " "	1870			1,136 54	1,280 36
" " " "	1871			1,285 84	1,539 02
" " " "	1872		1,939 46	1,166 80	1,393 63
" " " "	1873		540 11	2,199 64	1,264 40
" " " "	1874	12,753 27		2,614 90	7,208 63
" " "	1875	32,627 71		1,859 20	4,506 68
" " " "	1876	24,935 85		1,952 14	4,033 72
" " " "	1877	30,003 08		1,982 65	1,756 93
" " " "	1878	14,618 85		2,057 32	541 95
" " " "	1879	22,113 02		2,202 03	3,259 70
" " " "	1880	3,054 68		2,152 57	1,704 71
" " " "	1881	69,042 76		2,553 02	3,257 92
" " " "	1882	193,158 36		2,611 30	2,343 99
" " " "	1883	172,959 95		2,569 86	3,448 83
" " " "	1884	142,006 25		2,775 32	2,725 49
" " " "	1885	93,679 57		2,618 60	4,042 04
" " " "	1886	129,681 67		2,611 90	5,803 01
" " " "	1887	45,276 08	6,054 10	2,537 41	1,499 96
" " " "	1888	18,910 55	1,372 59	2,505 61	1,380 75
" " " "	1889	24,786 33		2,569 22	1,730 79
" " " "	1890	6,151 14		2,571 04	1,525 51
" " " "	1891		8,173 69	2,505 69	1,503 56
" " " "	1892		25,471 61	2,571 28	1,666 21
" " " "	1893		6,521 88	2,581 08	2,800 03
" " " "	1894		3,497 56	2,640 00	2,799 63
" " " "	1895		3,694 33	2,508 14	3,025 91
" " " "	1896			2,495 54	4,993 89
" " " "	1897			2,357 51	1,688 12
" " " "	1898			1,904 10	1,699 44
" " " "	1899			1,920 12	1,997 96
" " " "	1900			1,840 51	2,679 21
" " " "	1901			1,895 89	3,999 02
" " " "	1902			1,994 52	3,015 97
" " " "	1903		1,984 39	2,072 17	4,684 42
" " " "	1904			2,292 94	2,244 13
Total		*1,170,215 63	59,249 72	79,893 52	97,351 50

* Included in total cost of Ottawa River Works, see page 19.

Original construction	$ 134,456 51
Enlargement, including new lock	1,035,759 12
	$ 1,170,215 63

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

CARILLON AND GRENVILLE CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government		*			
Government expenditure prior to Confederation		63,053 64			
" since "	1868		19,817 22	6,301 88	8,911 28
" " "	1869			6,549 38	10,157 42
" " "	1870		4,167 96	6,617 81	9,852 09
" " "	1871		23,119 37	8,676 90	8,218 24
" " "	1872	165,257 28		8,324 51	17,235 31
" " "	1873	133,199 10	3,051 38	10,068 28	8,781 50
" " "	1874	245,258 38		10,710 88	10,605 82
" " "	1875	339,864 76		10,378 57	18,520 44
" " "	1876	326,203 16		10,764 38	11,475 96
" " "	1877	245,738 04		11,050 27	10,304 06
" " "	1878	22,676 20		11,401 30	5,082 72
" " "	1879	243,141 24		11,501 22	7,629 98
" " "	1880	281,514 27		11,959 14	7,625 54
" " "	1881	336,707 53		13,059 18	8,076 91
" " "	1882	433,084 39		14,387 49	7,582 68
" " "	1883	433,575 10		17,479 58	8,310 02
" " "	1884	399,267 16		17,393 91	7,918 42
" " "	1885	157,187 72		19,702 30	10,429 26
" " "	1886	104,973 24	75 00	20,597 82	9,303 31
" " "	1887	20,747 11		20,011 36	10,554 41
" " "	1888	38,996 29		21,531 12	10,036 62
" " "	1889	298 17		22,098 88	10,135 66
" " "	1890	17 58	4,526 61	15,896 16	7,582 38
" " "	1891		4,395 25	21,230 22	10,796 68
" " "	1892	34,585 64	15,036 48	17,458 69	8,620 15
" " "	1893	207 00	42,298 74	16,762 71	10,669 28
" " "	1894	385 55	20,034 94	14,144 98	11,620 09
" " "	1895		5,963 76	15,453 21	12,303 25
" " "	1896	3,850 31		13,995 69	12,161 10
" " "	1897	1,908 44	4,939 20	13,780 29	11,607 95
" " "	1898	82,663 37	5,082 03	11,697 81	10,993 61
" " "	1899	39,999 37		11,919 27	11,478 88
" " "	1900	22,802 27	4,476 50	13,657 06	14,666 71
" " "	1901	4,930 65	9,331 95	13,342 22	13,416 00
" " "	1902		16,998 69	13,725 99	19,366 30
" " "	1903		15,992 52	14,348 17	17,766 28
" " "	1904		9,150 07	16,224 94	17,262 29
Total		†4,182,092 96	208,457 67	514,203 57	407,058 60

* Expenditure not given—records relating to same were kept in Ordnance Office at Montreal and were destroyed by fire in 1852

† Included in total cost of Ottawa River Works, see page 19, cost of enlargement, $4,119,039.32.

S. LEONARD SHANNON
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

CULBUTE LOCK AND DAM.

	Year ending June 30.	Capital.	Renewals Chargeable to Incoms.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation..	1868				
" " " " ..	1869				
" " " " ..	1870				
" " " " ..	1871				
" " " " ..	1872				
" " " " ..	1873		835 53		
" " " " ..	1874		38,388 99		
" " " " ..	1875	63,659 29			
" " " " ..	1876	76,842 44			
" " " " ..	1877	56,081 87			
" " " " ..	1878	5,933 53			
" " " " ..	1879	20,694 19			
" " " " ..	1880	16,688 20		202 50	259 31
" " " " ..	1881	4,721 62		962 85	
" " " " ..	1882	29,567 15		790 00	162 33
" " " " ..	1883	14,249 60		695 00	288 99
" " " " ..	1884	8,151 16		733 50	
" " " " ..	1885	19,071 76		730 00	572 75
" " " " ..	1886	26,385 27		730 00	2,396 14
" " " " ..	1887	7,760 88		730 00	967 33
" " " " ..	1888	7,573 99		739 50	730 60
" " " " ..	1889	17,112 01		1,050 00	116 53
" " " " ..	1890	2,818 35		747 83	
" " " " ..	1891	2,183 15	9,122 05	745 25	499 91
" " " " ..	1892		1,546 25	736 00	
" " " " ..	1893		1,420 65	749 00	13 55
" " " " ..	1894		2,540 14	730 00	494 43
" " " " ..	1895		1,475 26	436 05	434 28
" " " " ..	1896				
" " " " ..	1897				
" " " " ..	1898				100 00
" " " " ..	1899				
" " " " ..	1900	3,085 00			
" " " " ..	1901	197 00			
" " " " ..	1902		1,135 00		
" " " " ..	1903				
" " " " ..	1904		2,204 50		
Total		*382,776 46	58,668 37	11,507 48	7,036 15

* Included in total cost of Ottawa River Works, see page 19.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

RIDEAU CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government	...	3,911,701 47	.....	.....	.....
Government expenditure prior to Confederation	.....	153,062 60	.....	.....	.....
" since " ..	1868	165 50	7,298 12	18,397 28	16,475 21
" " " ..	1869	.....	.....	19,250 71	13,140 77
" " " ..	1870	.....	13 16	20,022 37	19,469 33
" " " ..	1871	.....	11,732 98	22,814 58	18,120 52
" " " ..	1872	.....	4,967 50	22,139 48	14,005 32
" " " ..	1873	.....	18,070 97	22,841 51	26,074 49
" " " ..	1874	.....	5,793 16	26,815 44	22,957 40
" " " ..	1875	9,310 85	.....	26,553 37	19,699 81
" " " ..	1876	2,163 96	.....	26,430 77	14,428 25
" " " ..	1877	214 11	.....	25,959 56	14,198 18
" " " ..	1878	.....	.....	26,651 51	11,034 22
" " " ..	1879	7,703 88	.....	26,042 52	7,134 55
" " " ..	1880	.....	.....	26,463 88	11,434 05
" " " ..	1881	.....	133 50	26,024 71	8,627 00
" " " ..	1882	.....	.....	26,915 29	13,860 28
" " " ..	1883	.....	70 65	27 322 81	23,524 84
" " " ..	1884	.....	4,597 50	26,938 95	19,245 02
" " " ..	1885	.....	2,098 76	26,971 32	18,189 55
" " " ..	1886	.....	550 00	27,045 95	35,648 04
" " " ..	1887	.....	20,823 96	29,440 46	18,565 34
" " " ..	1888	.....	18,889 48	33,458 83	25,478 87
" " " ..	1889	.....	6,665 22	33,801 77	18,106 36
" " " ..	1890	.....	21,124 10	34,270 57	18,025 21
" " " ..	1891	.....	20,967 25	34,641 98	21,537 56
" " " ..	1892	.....	31,363 23	35,500 82	21,507 16
" " " ..	1893	.....	24,274 71	35,022 49	18,789 50
" " " ..	1894	.....	14,485 11	34,943 35	16,939 47
" " " ..	1895	.....	31,559 48	33,827 08	19,897 32
" " " ..	1896	.....	21,452 29	34,052 77	30,196 38
" " " ..	1897	.....	19,079 11	31,461 55	29,535 94
" " " ..	1898	.....	13,608 39	30,759 05	26,599 93
" " " ..	1899	.....	700 29	30,751 20	28,199 49
" " " ..	1900	.....	11,780 41	30,623 27	30,237 09
" " " ..	1901	.....	.....	31,334 40	33,791 17
" " " ..	1902	.....	8,894 40	32,193 66	33,959 86
" " " ..	1903	.....	16,235 13	34,595 31	36,424 23
" " " ..	1904	.....	13,525 04	39,127 96	38,496 78
Total	...	*4,084,323 37	350,753 90	1,071,408 53	793,554 49

* Ottawa River Works.

Ste. Anne's Lock, page 16		$ 1,170,215 63
Carillon and Grenville Canal, page 17		4,182,092 96
Culbute Canal, paga 18		382,776 46
Rideau Canal, as above	$ 4,084,323 37	
Less expenditure by Imperial Government	3,911,701 47	
		172,621 90
Total Ottawa River Works (Capital)		$ 5,907,706 95
Add expenditure on slides and booms prior to Confederation	$ 719,247 13	
" " " since "	7,243 60	
" on Chats Canals prior to Confederation	482,950 81	
" in 1881, charged to Miscellaneous, see page 229, part ii, Public Accounts	1,136 84	
Add amount transferred, see page xxxvi, Public Accounts Balance Sheet, 1881	233,555 85	
		1,444,134 23
		$ 7,351,841 18
Less expenditure prior to Confederation, transferred to Income Account	$ 320,618 28	
Less expenditure in 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous	165,257 28	
		485,875 56
Agreeing with Balance Sheet, Public Accounts, 1904, page 4		$ 6,865,965 62

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

S. LEONARD SHANNON,
Accountant.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

ST. OURS LOCK.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		121,537 65			
" since " "	1868			1,532 75	753 74
" " " "	1869			1,755 15	1,399 18
" " " "	1870			1,458 09	1,006 22
" " " "	1871			1,414 48	1,210 98
" " " "	1872			1,565 80	1,263 19
" " " "	1873			2,076 50	1,575 10
" " " "	1874			2,219 13	2,363 42
" " " "	1875			1,362 22	1,245 69
" " " "	1876			1,403 92	1,601 71
" " " "	1877			1,533 40	750 80
" " " "	1878			1,556 65	283 77
" " " "	1879			1,581 55	456 07
" " " "	1880			1,614 01	705 54
" " " "	1881			1,741 97	1,299 77
" " " "	1882			2,002 71	1,902 41
" " " "	1883		17,230 32	2,361 65	2,188 08
" " " "	1884		5,279 17	2,315 37	1,494 99
" " " "	1885		4,700 64	2,271 57	3,652 63
" " " "	1886			2,311 70	4,143 47
" " " "	1887			2,175 37	5,864 78
" " " "	1888			2,216 04	2,801 17
" " " "	1889		17,964 45	2,421 14	2,002 63
" " " "	1890		24,571 96	2,138 40	1,935 44
" " " "	1891		21,696 74	2,011 08	4,460 16
" " " "	1892		3,585 34	2,168 44	1,944 33
" " " "	1893			2,136 66	1,994 34
" " " "	1894			2,216 68	924 55
" " " "	1895			2,161 63	915 50
" " " "	1896			2,094 91	1,678 49
" " " "	1897			2,135 60	707 06
" " " "	1898			2,049 67	692 04
" " " "	1899			2,244 12	1,494 93
" " " "	1900		1,596 88	2,181 43	2,681 10
" " " "	1901		3,610 06	2,128 25	1,681 44
" " " "	1902		15,549 27	2,262 39	984 36
" " " "	1903		9,344 89	2,288 63	1,671 83
" " " "	1904		7,984 41	2,334 67	1,690 61
Total ...		*121,537 65	133,114 13	73,443 73	65,421 52

* Included in the total cost of Chambly Canal and Richelieu River, *see* page 21.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

CHAMBLY CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		634,711 76			
" since " "	1868			8,312 90	9,355 70
" " " "	1869			8,437 22	13,120 97
" " " "	1870			8,934 41	20,180 73
" " " "	1871		2,839 85	10,214 71	22,426 33
" " " "	1872		1,906 40	9,628 50	22,327 99
" " " "	1873		759 00	10,390 44	11,789 27
" " " "	1874		2,810 00	11,675 67	16,427 19
" " " "	1875	2,415 00		12,201 99	16,306 91
" " " "	1876			10,593 14	13,273 56
" " " "	1877	80 00		10,281 78	10,111 32
" " " "	1878			10,413 99	6,022 96
" " " "	1879			11,301 53	8,809 77
" " " "	1880			11,516 22	12,377 74
" " " "	1881			13,950 47	20,705 17
" " " "	1882		31,796 41	16,686 78	16,843 60
" " " "	1883		21,332 36	15,904 38	15,182 24
" " " "	1884		41,640 77	18,448 85	12,003 34
" " " "	1885		21,049 23	18,378 55	13,046 95
" " " "	1886		14,547 27	19,501 28	11,999 77
" " " "	1887		17,911 17	19,053 62	20,071 37
" " " "	1888		65,536 64	20,073 60	11,823 74
" " " "	1889		51,437 87	19,679 22	19,392 18
" " " "	1890		23,221 48	19,655 38	14,399 93
" " " "	1891		43,344 41	19,204 76	11,399 93
" " " "	1892		38,353 99	19,665 22	12,976 48
" " " "	1893		21,127 65	19,310 29	12,451 03
" " " "	1894		8,567 78	19,040 93	11,920 74
" " " "	1895		6,147 63	19,325 49	11,779 12
" " " "	1896		3,694 63	19,349 65	11,801 12
" " " "	1897		12,665 88	18,754 17	13,128 55
" " " "	1898		13,184 68	17,992 90	12,466 51
" " " "	1899		15,255 42	18,336 50	11,997 51
" " " "	1900		5,448 88	18,397 58	13,995 00
" " " "	1901		1,195 09	18,529 48	17,572 35
" " " "	1902		19,132 80	18,832 25	17,313 02
" " " "	1903		8,977 43	19,286 10	21,745 65
" " " "	1904		26,701 59	21,544 69	25,656 00
		637,206 76			
Less proceeds of sale of piece of land		150 00			
Total		*637,056 76	520,586 31	582,804 64	544,201 74

*Chambly Canal and River Richelieu.

Chambly Canal, as above		$ 637,056 76
St. Ours Lock, see page 20		121,537 65
		$ 758,594 41
Less amount deducted at Confederation, see Public Accounts, 1868, part i, page 9.		
Government expenditure prior to Confederation.		
Chambly Canal, as above	$ 634,711 76	
St. Ours Lock, see page 20	121,537 65	
	$ 756,249 41	
Returned as an asset in Public Accounts, 1868	433,807 83	
		322,441 58
Agreeing with Public Accounts, 1904, page 4		$ 436,152 83

S. LEONARD SHANNON,
Accountant,

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

MURRAY CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation					
" since " ..	1868		400 00		
" " " ..	1869				
" " " ..	1870				
" " " ..	1871				
" " " ..	1872				
" " " ..	1873				
" " " ..	1874				
" " " ..	1875				
" " " ..	1876				
" " " ..	1877				
" " " ..	1878				
" " " ..	1879				
" " " ..	1880				
" " " ..	1881				
" " " ..	1882	7,135 63			
" " " ..	1883	84,071 68			
" " " ..	1884	118,187 43			
" " " ..	1885	148,902 66			
" " " ..	1886	179,704 52			
" " " ..	1887	142,563 66			
" " " ..	1888	146,754 37			
" " " ..	1889	215,326 46			
" " " ..	1890	106,760 35		494 31	
" " " ..	1891	61,260 49		5,137 03	173 53
" " " ..	1892	5,964 22		5,803 48	3,505 15
" " " ..	1893	30,838 79		5,499 62	5,341 34
" " " ..	1894			5,667 52	5,295 57
" " " ..	1895			5,354 97	5,063 49
" " " ..	1896			5,409 10	5,410 33
" " " ..	1897			5,526 87	3,966 41
" " " ..	1898			5,799 94	4,710 23
" " " ..	1899			5,073 70	3,533 68
" " " ..	1900			5,613 83	2,777 60
" " " ..	1901			5,175 74	1,138 15
" " " ..	1902			5,254 51	6,377 19
" " " ..	1903	500 00		5,757 00	4,627 70
" " " ..	1904	750 00	2,521 13	5,291 43	6,075 94
Total	....	*1,248,720 26	2,921 13	76,859 05	57,996 31

*Agreeing with Public Accounts Balance Sheet, 1904, page 4.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c. —*Con.*

TRENT CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	....	309,371 31	.....	.....	.....
" since " ..	1868	.....	.....	.....	.....
" " " ..	1869	.....	.....	.....	.....
" " " ..	1870	.....	.....	.....	.....
" " " ..	1871	.....	.....	.....	.....
" " " ..	1872	.....	.....	.....	.....
" " " ..	1873	.....	.....	.....	.....
" " " ..	1874	.....	.....	.....	.....
" " " ..	1875	.....	.....	.....	.....
" " " ..	1876	.....	.....	.....	.....
" " " ..	1877	.....	.....	.....	.....
" " " ..	1878	.....	.....	.....	.....
" " " ..	1879	.....	.....	.....	.....
" " " ..	1880	561 50	.....	1,188 92	3,568 89
" " " ..	1881	.....	.....	2,489 93	2,233 50
" " " ..	1882	.....	5,836 51	2,011 92	8,115 50
" " " ..	1883	40,767 16	9,303 66	2,235 50	3,047 42
" " " ..	1884	120,393 91	6,198 57	2,208 64	5,264 35
" " " ..	1885	121,382 84	.....	3,303 87	4,653 50
" " " .	1886	75,103 30	.....	1,639 75	5,917 88
" " " ..	1887	179,541 63	.....	1,938 08	6,008 88
" " " ..	1888	114,879 35	.....	1,770 29	5,151 42
" " " ..	1889	47,592 13	29,677 92	3,242 05	5,935 94
" " " ..	1890	58,644 50	11,522 65	3,450 99	730 55
" " " ..	1891	9,826 49	3,164 81	3,803 66	4,888 98
" " " ..	1892	4,457 28	6,506 97	3,695 85	4,721 85
" " " ..	1893	5,962 47	10,838 90	3,739 86	2,087 17
" " " ..	1894	3,412 32	20,403 93	3,785 47	4,988 59
" " " ..	1895	53,907 70	21,143 41	4,184 18	3,374 49
" " " ..	1896	392,976 08	6,185 75	4,349 34	3,329 97
" " " ..	1897	486,575 70	13,880 37	4,965 39	3,497 90
" " " ..	1898	351,273 31	8,991 54	5,034 60	4,998 80
" " " ..	1899	166,611 49	6,179 79	5,048 72	6,454 49
" " " ..	1900	334,583 01	8,043 39	5,131 52	9,989 26
" " " ..	1901	284,503 89	10,494 82	5,254 51	13,075 89
" " " ..	1902	449,075 45	26,165 93	5,575 52	14,984 88
" " " ..	1903	523,950 74	18,548 58	6,993 25	10,791 15
" " " ..	1904	489,038 44	21,228 55	7,237 05	21,179 12
Total	.....	*4,624,392 00	244,316 05	94,278 86	158,990 37

*Total expenditure on Capital Account as above $4,624,392 00
LESS—Expenditure prior to Confederation .....$ 309,371 31
" Year 1880..... 561 50
309,932 81

Agreeing with Public Accounts Balance Sheet, 1904, page 4..... $4,314,459 19

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

TAY CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872				
" " "	1873				
" " "	1874				
" " "	1875				
" " "	1876				
" " "	1877				
" " "	1878				
" " "	1879				
" " "	1880				
" " "	1881				
" " "	1882		748 65		
" " "	1883	4,831 80			
" " "	1884	50,878 12			
" " "	1885	92,473 97			
" " "	1886	65,561 51			
" " "	1887	49,617 92			
" " "	1888	54,166 57			
" " "	1889	89,486 18			
" " "	1890	22,226 23		*	*
" " "	1891	17,114 78		*	*
" " "	1892	29,771 65		*	*
" " "	1893			*	*
" " "	1894			*	*
" " "	1895			*	*
" " "	1896			*	*
" " "	1897	10,720 50		*	*
" " "	1898			*	*
" " "	1899			*	*
" " "	1900	2,750 00		*	*
" " "	1901			*	*
" " "	1902			*	*
" " "	1903			*	*
" " "	1904			*	*
Total		†489,599 23	748 65	*	*

* Included in Rideau Canal.
† Agreeing with Public Accounts, 1904, page 4

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

SAULT STE. MARIE CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1868				
" " " ..	1869				
" " " ..	1870				
" " " ..	1871				
" " " ..	1872		949 35		
" " " ..	1873				
" " " ..	1874				
" " " ..	1875				
" " " ..	1876				
" " " ..	1877				
" " " ..	1878				
" " " ..	1879				
" " " ..	1880				
" " " ..	1881				
" " " ..	1882				
" " " ..	1883				
" " " ..	1884				
" " " ..	1885				
" " " ..	1886				
" " " ..	1887				
" " " ..	1888	8,145 06			
" " " ..	1889	34,018 95			
" " " ..	1890	176,568 55			
" " " ..	1891	325,336 33			
" " " ..	1892	341,474 31			
" " " ..	1893	589,801 25			
" " " ..	1894	1,316,529 29			
" " " ..	1895	466,151 50		3,432 73	
" " " ..	1896	189,986 59		16,074 70	2,650 17
" " " ..	1897	209,561 82		15,381 59	7,671 79
" " " ..	1898	21,004 56		14,389 92	8,172 09
" " " .	1899	63,935 48		13,840 24	6,564 40
" " " ..	1900	27,157 98		13,901 40	13,219 87
" " " ..	1901	323,353 93	48 39	13,730 93	10,289 18
" " " ..	1902	122,505 73		15,920 80	14,839 71
" " " ..	1903	65,933 43		16,077 22	10,855 70
" " " ..	1904	32,029 54		14,653 35	9,491 44
Total		*4 313,494 30	997 74	137,402 88	83,754 35

Agreeing with Public Accounts, 1904, page 4.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

SOULANGES CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	...	...	...	...	...
" since " ..	1868	...	...	...	...
" " " ..	1869	...	...	...	...
" " " ..	1870	...	...	...	...
" " " ..	1871	...	...	...	...
" " " ..	1872	...	...	...	...
" " " ..	1873	...	...	...	...
" " " ..	1874	...	...	...	...
" " " ..	1875	...	...	...	...
" " " ..	1876	...	...	...	...
" " " ..	1877	...	...	...	...
" " " ..	1878	...	...	...	...
" " " ..	1879	...	...	...	...
" " " ..	1880	...	...	...	...
" " " ..	1881	...	...	...	...
" " " ..	1882	...	...	...	...
" " " ..	1883	...	...	...	...
" " " ..	1884	...	...	...	...
" " " ..	1885	...	...	...	...
" " " ..	1886	...	...	...	...
" " " ..	1887	...	...	...	...
" " " ..	1888	...	...	...	...
" " " ..	1889	...	...	...	...
" " " ..	1890	...	...	...	...
" " " ..	1891	...	...	...	...
" " " ..	1892	54,235 76	...	...	...
" " " ..	1893	210,336 24	...	...	...
" " " ..	1894	723,380 95	...	...	...
" " " ..	1895	752,016 53	...	...	...
" " " ..	1896	535,939 07	...	...	...
" " " ..	1897	363,126 06	...	...	...
" " " ..	1898	1,016,401 00	...	...	...
" " " ..	1899	1,442,824 22	...	...	...
" " " .	1900	693,806 24	...	6,711 84	5,000 00
" " " ..	1901	462,626 36	115 00	25,154 78	5,888 77
" " " ..	1902	235,021 79	...	22,672 50	2,267 13
" " " ..	1903	248,929 10	...	31,987 06	10,362 23
" " " ..	1904	113,328 45	15,608 69	25,235 25	39,382 01
Total.....	.....	*6,851,971 77	15,723 69	111,761 43	62,900 14

*Included in total cost of St. Lawrence River and Canals, *see* part ii, page 9.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

STATEMENT showing amount expended on Construction and Enlargement of Canals, to June 30, 1904.

Canal.	Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Peters	248,762 84	399,784 30	648,547 14
Lachine	2,589,532 85	8,773,118 33	11,362,651 18
Beauharnois	1,636,690 26		1,636,690 26
St. Lawrence River and Canals	18,442 85	2,940,480 27	2,958,923 12
Lake St. Louis		298,176 11	298,176 11
Lake St. Francis		75,906 71	75,906 71
Cornwall	1,945,624 73	5,131,469 40	7,077,094 13
Williamsburg—Farran's Point		868,981 58	9,869,087 32
Williamsburg—Galops		5,527,586 46	
Williamsburg—Rapide Plat		2,149,377 11	
Williamsburg—Williamsburg	1,320,655 54	2,486 63	
Welland	7,693,824 03	17,496,084 28	25,189,908 31
St. Anne's	134,456 51	1,035,759 12	1,170,215 63
*Carillon and Grenville	63,053 64	4,119,039 32	4,182,092 96
Culbute	382,776 46		382,776 46
Rideau	4,084,323 37		4,084,323 37
St. Ours	121,537 65		121,537 65
Chambly	637,056 76		637,056 76
Murray	1,248,720 26		1,248,720 26
Trent	4,624,392 00		4,624,392 00
Tay	489,599 23		489,599 23
Sault Ste. Marie	4,313,494 30		4,313,494 30
Soulanges	6,851,971 77		6,851,971 77
Total	38,404,915 05	48,818,249 62	87,223,164 67

*Construction by Imperial Government not included, records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

*RECAPITULATION—Expenditure on Canals, also showing Revenue received.

——	Year ending June 30.	Capital.	Income.	Staff.	Repairs.	Revenue received.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation, including Imperial Government	.....	20,593,866 13	98,378 46	.....	.....	.....
Government expenditure since Confederation	1868	33,784 06	95,347 79	113,084 50	101,646 44	403,879 19
" "	1869	126,898 20	55 00	116,069 76	118,579 31	400,263 32
" "	1870	.....	90,355 96	120,403 02	150,176 70	414,687 02
" "	1871	.....	116,429 54	135,040 81	140,467 52	488,538 76
" "	1872	255,645 75	33,289 27	124,137 09	152,086 25	466,847 52
" "	1873	256,547 27	127,369 55	148,581 18	186,573 13	486,433 26
" "	1874	1,189,591 91	51,037 05	167,194 40	213,613 86	510,755 99
" "	1875	1,714,830 37	479 00	168,401 21	203,226 85	414,979 59
" "	1876	2,388,733 46	810 75	178,411 80	190,578 45	390,337 04
" "	1877	4,131,374 30	22 30	179,661 40	138,448 51	390,857 37
" "	1878	3,843,338 62	.....	187,521 31	122,251 60	373,814 17
" "	1879	3,064,098 61	.....	191,892 44	115,349 99	337,675 13
" "	1880	2,123,366 34	.....	195,039 33	147,167 52	341,598 14
" "	1881	2,075,891 65	7,246 69	197,573 62	154,653 63	361,558 17
" "	1882	1,593,174 09	55,025 03	224,572 61	187,399 02	325,231 54
" "	1883	1,763,001 97	62,503 14	269,415 01	178,617 86	361,604 01
" "	1884	1,577,295 42	60,993 99	280,657 29	192,219 38	372,561 69
" "	1885	1,504,621 47	58,297 59	280,226 20	201,708 47	321,289 47
" "	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
" "	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
" "	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
" "	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
" "	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
" "	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
" "	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
" "	1893	2,069,573 30	196,185 84	291,588 97	204,759 39	357,089 87
" "	1894	3,027,164 19	109,216 33	294,446 34	179,630 13	387,788 97
" "	1895	2,452,273 65	216,057 58	281,477 04	164,033 71	339,890 49
" "	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	339,538 72
" "	1897	2,348,636 91	101,205 74	287,970 36	178,385 47	384,780 53
" "	1898	3,207,249 79	82,400 55	280,872 44	203,478 86	407,652 81
" "	1899	3,899,877 31	82,205 60	280,628 57	202,312 36	369,044 38
" "	1900	2,639,564 93	120,653 93	292,609 24	227,626 97	322,642 86
" "	1901	2,360,569 89	135,500 57	314,095 04	262,876 07	315,425 69
" "	1902	2,114,689 88	213,044 91	317,838 61	263,768 27	300,413 68
" "	1903	1,823,273 61	275,103 58	390,281 82	294,113 92	230,213 15
" "	1904	1,880,787 20	298,678 23	381,016 82	350,278 54	79,536 51
Total	.....	87,223,164 67	3,661,085 64	9,022,018 85	7,086,627 87	13,327,506 35

*This does not include expenditure which has been charged to Canals,—General—but amounts expended on specified canals.

S. LEONARD SHANNON,
Accountant.

Department of Railways and Canals,
Ottawa, October 31, 1904.

HYDRAULIC AND OTHER RENTS, 1903–1904.

Balances due July 1.	Accrued during the Year ended June 30.	Totals.	——	Abatement.	Paid into the Hands of the Collectors.	Balances Due June 30.	Totals.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
34,037 08	20,554 16	54,591 24	Welland Canal	55 00	15,500 16	39,036 08	54,591 24
1,6 6 84	1,657 00	3,353 84	Williamsburg Canal	290 00	1,463 67	1,600 17	3,353 84
3,328 50	5,271 00	8,599 50	Cornwall Canal	38 63	5,115 00	3,445 87	8,599 50
12,213 84	3,718 00	15,931 84	Beauharnois Canal	4 50	3,542 50	12,384 84	15,931 84
17,283 32	41,280 29	58,563 61	Lachine Canal	556 00	38,131 11	19 876 50	58,563 61
652 84	324 60	976 84	Chambly Canal		301 00	675 84	976 84
3,446 51	3,631 35	7,077 86	Rideau Canal		3,318 30	3,759 56	7,077 86
307 00	2,611 04	2,918 04	Trent Valley Canal	13 55	1,321 54	1,582 95	2,918 04
5 00	495 00	500 00	Sault Ste. Marie Canal		490 00	10 00	500 00
10,557 00	5,499 00	16,056 00	Carillon and Grenville Canal		481 00	15,575 00	16,056 00
9 00	37 00	46 00	Sundry canals		37 00	9 00	46 00
	3,000 00	3,000 00	Soulanges Canal		3,000 00		3,000 00
83,536 93	88,077 84	171,614 77	Totals	957 68	72,701 28	97,955 81	171,614 77

Department of Railways and Canals,
Ottawa, October, 31, 1904.

S. LEONARD SHANNON,
Accountant.

REVENUE STATEMENT.

Canal Revenue.				Total Canal Revenue Accrued.	Hydraulic and Other Rents, &c.	Total.	Collection Divisions.	Deposited to the Credit of the Receiver General.		Total.	Cost of Staff, Repairs and Offices of Collection chargeable to Revenue.
Tolls.	Wharfage and Storage.	Fines.	Other Receipts.					On Account Canal Revenue.	On Account Hydraulic Rents.		
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
							Welland Canal				182,981 58
			0 76	0 76	734 00	734 76	Port Colborne	0 76	734 00	734 76	3,590 42
		7 00	309 50	316 50	1,565 50	1,882 00	Port Dalhousie	316 50	1,565 50	1,882 00	2,175 03
					226 00	226 00	Dunnville		226 00	226 00	780 05
							Port Maitland				
		10 00		10 00	12,969 66	12,979 66	St. Catharines	10 00	12,969 66	12,979 66	203 92
					5 00	5 00	Chippawa		5 00	5 00	124 96
		17 00	310 26	327 26	15,500 16	15,827 42	Totals	327 26	15,500 16	15,827 42	189,855 96
							St. Lawrence Canals				329,773 00
		85 00		85 00	3,000 00	3,085 00	Coteau Landing	85 00	3,000 00	3,085 00	1,543 20
					3,542 50	3,542 50	Beauharnois		3,542 50	3,542 50	957 95
		49 22		49 22	5,115 00	5,164 22	Cornwall	49 22	5,115 00	5,164 22	1,708 70
					1,463 67	1,463 67	Cardinal		1,463 67	1,463 67	1,061 35
	7 80		957 63	965 43		965 43	Lachine	965 43		965 43	2,284 66
	2,387 53		3,151 12	5,538 65	38,131 11	43,669 76	Montreal	5,538 65	38,131 11	43,669 76	8,163 13
							Kingston				696 45
	2,395 33	134 22	4,108 75	6,638 30	51,252 28	57,890 58	Totals	6,638 30	51,252 28	57,890 58	346,188 44
							Chambly Canal				51,978 67
		10 00		10 00	224 00	234 00	Chambly	10 00	224 00	234 00	1,651 25
					77 00	77 00	St. John's		77 00	77 00	1,625 77
							St. Ours				685 50
		10 00		10 00	301 00	311 00	Totals	10 00	301 00	311 00	55,941 19
							Ottawa Canals				38,888 30
							Ottawa				
			8 00	8 00	461 00	469 00	Grenville	8 00	461 00	469 00	466 55
					20 00	20 00	Carillon		20 00	20 00	684 02
							St. Anne's Lock				795 53
			8 00	8 00	481 00	489 00	Totals	8 00	481 00	489 00	40,834 40

							Rideau Canal				77,624 74
	18 84		211 00	229 84	3,031 95	3,261 79	Ottawa	229 84	3,031 95	3,261 79	2,593 70
			15 00	15 00	230 00	245 00	Kingston Mills	15 00	230 00	245 00	427 86
					56 35	56 35	Smith's Falls		56 35	56 35	345 00
	18 84		226 00	244 84	3,318 30	3,563 14	Totals	244 84	3,318 30	3,563 14	80,991 30
											3,249 39
					32 00	32 00	*St. Peter's Canal*		32 00	32 00	199 92
							Totals				3,449 31
							Murray Canal				11,856 97
							Brighton		5 00	5 00	732 88
					5 00	5 00	Totals				12,589 85
							Trent Valley Canal				28,416 17
							Burleigh				15 00
			55 00	55 00		55 00	Bobcaygeon	55 00		55 00	23 73
							Fenelon Falls				15 00
							Hastings				
					1,321 54	1,321 54	Peterborough		1,321 54	1,321 54	89 45
							Buckhorn				
			55 00	55 00	1,321 54	1,376 54	Totals	55 00	1,321 54	1,376 54	28,559 35
					490 00	490 00	*Sault Ste. Marie Canal*		490 00	490 00	25,620 09
	2,414 17	161 22	4,708 01	7,283 40	72,701 28	79,984 68		7,283 40	72,701 28	79,984 68	
							Dredge vessels				11,049 36
							Inspection				
							Department of Public Printing and Stationery				739 66
							General				1,543 75
							Grand totals	7,283 40	72,701 28	79,984 68	797,362 66
							Less Refunds	448 17		448 17	
							Net revenue	6,835 23	72,701 28	79,536 51	

S. LEONARD SHANNON,
Accountant.

Department of Railways and Canals,
Ottawa, October 31, 1904.

INTERCOLONIAL RAILWAY.

(Including amounts paid to Nova Scotia Railway and European and North American Railway, N.B.)

——	Year.	Construction.	Income.	Working Expenses including Windsor Branch Ry.	Revenue received, including Windsor Branch Ry.
		$ cts.	$ cts.	$ cts.	$ cts.
Expenditure prior to Confederation	....	10,766,725 54	.....	.....	.....
" since "	1868	483,353 65	.....	359,961 08	420,752 58
" " "	1869	282,615 18	.....	387,548 47	455,022 76
" " "	1870	1,729,381 49	.....	445,208 75	471,245 09
" " "	1871	2,916,782 13	.....	442,993 31	565,713 52
" " "	1872	5,131,141 51	.....	595,076 22	622,900 56
" " "	1873	5,201,450 37	.....	1,011,892 60	703,458 26
" " "	1874	3,614,898 81	.....	1,847,175 24	893,430 17
" " "	1875	3,426,099 55	.....	1,532,589 62	861,593 43
" " "	1876	1,108,321 59	.....	1,277,197 79	848,861 46
" " "	1877	1,318,352 19	.....	1,661,673 55	1,154,445 35
" " "	1878	408,816 74	.....	1,811,273 56	1,378,946 78
" " "	1879	226,639 19	.....	2,010,183 22	1,294,099 69
" " "	1880	2,048,014 60	.....	1,607,956 70	1,520,310 45
" " "	1881	608,732 80	.....	1,780,353 53	1,777,856 76
" " "	1882	585,568 79	.....	2,080,592 37	2,100,315 85
" " "	1883	1,616,632 96	.....	2,383,477 20	2,395,034 99
" " "	1884	1,405,377 52	.....	2,366,719 95	2,376,666 19
" " "	1885	1,195,363 08	.....	2,460,229 87	2,392,605 00
" " "	1886	544,958 17	.....	2,508,473 10	2,406,858 88
" " "	1887	823,070 86	.....	2,854,158 91	2,621,337 41
" " "	1888	742,203 09	.....	3,300,481 94	2,937,337 40
" " "	1889	655,228 13	.....	3,174,785 19	2,923,736 46
" " "	1890	365,246 48	.....	3,500,455 80	2,958,243 38
" " "	1891	79,929 34	.....	3,691,273 65	3,007,630 51
" " "	1892	168,101 77	.....	3,458,891 39	2,978,950 82
" " "	1893	228,984 79	.....	3,062,207 45	3,099,815 20
" " "	1894	166,362 43	.....	2,999,317 07	3,020,485 74
" " "	1895	327,034 51	.....	2,964,940 98	2,979,795 59
" " "	1896	259,105 23	.....	3,029,304 08	2,994,201 93
" " "	1897	145,142 00	.....	2,936,789 71	2,906,631 25
" " "	1898	252,367 20	70,000 00	3,275,830 14	3,154,896 49
" " "	1899	1,081,929 94	210,000 00	3,478,559 30	3,775,558 08
" " "	1900	1,796,348 29	.....	4,444,296 25	4,599,423 14
" " "	1901	3,633,836 57	.....	5,477,285 30	5,019,497 76
" " "	1902	4,621,841 05	.....	5,596,939 57	5,720,990 50
" " "	1903	2,254,266 68	.....	6,214,496 38	6,366,884 53
" " "	1904	†1,880,856 60	.....	7,264,263 13	6,392,865 48
Total	....	*64,101,080 82	280,000 00	99,288,852 37	92,098,399 44

* Including $296,672.90 charged to 'Consolidated Fund.'

† Expenditure for year $1,894,856 90
Less refunds of previous years 14,000 30

$1,880,856 60

INTERCOLONIAL RAILWAY—*Concluded.*

Total cost of construction as shown on page 32			$64,101,086 82
Less amounts transferred from Capital to Consolidated Fund as follows:			
	Nova Scotia Ry.	European and North American Ry.	
1868	$ 16,800 99	$ 11,302 89	
1870	34,403 45	1,749 21	
1871	50,405 69		
1873	106,899 59	75,311 08	
	$ 208,509 72	$ 88,363 18	
		208,509 72	
			296,872 90
			$63,804,207 92
Cape Breton Railway, page 36			3,860,679 14
Oxford and New Glasgow Railway, page 37			1,949,063 21
Eastern Extension Railway, page 34			1,324,042 81
Montreal and Europe Short Line Railway, page 38			333,942 72
Drummond County Railway, page 42			1,464,000 00
Total capital cost of Intercolonial Railway system			*$ 72,735,935 80

*Agreeing with Public Accounts, 1903-4, page 4.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

EASTERN EXTENSION RAILWAY.

——	Year.	Capital.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation,				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
" " "	1875			
" " "	1876			
" " "	1877			
" " "	1878			
" " "	1879			
" " "	1880			
" " "	1881			
" " "	1882			
" " "	1883			
" " "	1884	1,284,311 97	10,033 77	30,767 66
" " "	1885	2,055 92	78,273 65	73,050 01
" " "	1886	183 79	94,756 06	66,893 11
" " "	1887		94,254 04	64,107 10
" " "	1888		90,954 73	70,552 20
" " "	1889	34,235 73	90,719 04	72,436 65
" " "	1890		79,102 77	84,658 95
" " "	1891	3,255 40	*	†
" " "	1892		*	†
" " "	1893		*	†
" " "	1894		*	†
" " "	1895		*	†
" " "	1896		*	†
" " "	1897		*	†
" " "	1898		*	†
" " "	1899		*	†
" " "	1900		*	†
" " "	1901		*	†
" " "	1902		*	†
" " "	1903		*	†
" " "	1904		*	†
Total		‡ 1,324,042 81	538,094 06	462,465 68

* Included in Intercolonial Railway expenses. † Included in Intercolonial Railway revenue.
‡ Included in total cost of Intercolonial Railway system, page 33.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

CARLETON BRANCH RAILWAY.

——	Year.	Capital.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
" " "	1875			
" " "	1876			
" " "	1877			
" " "	1878			
" " "	1879			
" " "	1880			
" " "	1881			
" " "	1882			
" " "	1883			
" " "	1884			
" " "	1885			
" " "	1886	85,610 69		
" " "	1887	2,299 62		
" " "	1888	500 17		
" " "	1889			
" " "	1890			
" " "	1891			
" " "	1892			
" " "	1893			
" " "	1894			
" " "	1895			
" " "	1896			
" " "	1897			
" " "	1898			
" " "	1899			
" " "	1900			
" " "	1901			
" " "	1902			
" " "	1903			
" " "	1904			
Total		*88,410 48		

*56 Victoria, chap. 6, transferred the Carleton Branch Railway to the city of St. John, N.B., for the sum of $40,000, which sum was paid in March, 1893, to the Receiver General.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

CAPE BRETON RAILWAY.

	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	1868		
" since "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887	76,501 89	
" " "	1888	689,450 50	
" " "	1889	1,083,276 60	
" " "	1890	1,170,523 62	
" " "	1891	521,441 62	
" " "	1892	99,936 96	
" " "	1893	59,982 74	
" " "	1894	158,770 61	
" " "	1895	*	
" " "	1896	*	
" " "	1897	405 00	
" " "	1898	389 60	
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
Total		§3,860,679 14	†

*Included in Intercolonial Railway capital. †Included in Intercolonial Railway working expenses.
§Included in total cost of Intercolonial Railway system, see page 33.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

OXFORD AND NEW GLASGOW.

—	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	1868		
" since "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887		
" " "	1888	280,932 35	
" " "	1889	840,553 57	
" " "	1890	434,074 60	
" " "	1891	220,886 39	
" " "	1892	48,745 23	
" " "	1893	7,922 80	
" " "	1894	112,382 75	
" " "	1895	*	
" " "	1896	*	
" " "	1897	3,565 52	
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
Total		‡ 1,949,063 21	†

*Included in Intercolonial Railway capital. †Included in Intercolonial Railway working expenses.
‡Included in total cost of Intercolonial Railway system, page 33.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	1868		
" since " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885	49,587 45	
" " "	1886	135,214 38	
" " "	1887	24,157 32	
" " "	1888	397 35	
" " "	1889		
" " "	1890		
" " "	1891	124,568 23	
" " "	1892		
" " "	1893		
" " "	1894	17 99	
" " "	1895		
" " "	1896		
" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
Total		*333,942 72	

* Included in total cost of Intercolonial Railway system, page 33.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		3,114,735 11		
" since "	1874		750 00	
" " "	1875	46,086 63	49,344 62	24,493 99
" " "	1876	42,546 10	219,930 43	118,060 96
" " "	1877	200,000 00	228,595 25	130,664 92
" " "	1878	6,551 86	221,599 49	135,899 60
" " "	1879	40,129 05	223,313 12	125,855 91
" " "	1880	16,539 82	164,640 55	113,851 11
" " "	1881		203,122 88	131,131 43
" " "	1882	402 03	228,259 97	137,267 54
" " "	1883	57,186 02	252,808 41	146,170 42
" " "	1884	130,663 38	236,428 13	144,504 12
" " "	1885	76,956 56	211,207 01	158,588 06
" " "	1886	4,668 33	216,744 34	155,584 36
" " "	1887	5,800 00	204,237 45	155,303 37
" " "	1888		229,639 95	158,363 62
" " "	1889		247,559 44	171,369 56
" " "	1890		266,485 85	160,971 78
" " "	1891		257,990 08	174,258 05
" " "	1892	8,300 49	289,706 38	157,442 69
" " "	1893		226,422 17	162,690 42
" " "	1894		226,891 06	158,533 83
" " "	1895		232,905 19	149,654 78
" " "	1896		225,138 56	146,476 54
" " "	1897		240,489 90	153,443 13
" " "	1898	17,541 88	231,418 74	158,950 61
" " "	1899	22,000 00	218,053 01	165,012 03
" " "	1900	53,546 02	220,931 81	174,738 73
" " "	1901	280,173 93	261,766 24	193,883 48
" " "	1902	475,997 94	270,159 97	197,999 93
" " "	1903	829,414 18	259,637 82	217,714 24
" " "	1904	698,877 47	335,695 44	234,390 03
Total		*6,128,116 80	6,901,873 26	4,613,269 24

* Agrees with Public Accounts Balance Sheet, 1903-1904, page 4.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

CANADIAN PACIFIC RAILWAY.

	Year.	Construction, including Subsidy of $25,000,000.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation ...	.....	....	.....	... .
" since " ...	1868	....	.....	.. . .
" " " ...	1869	.....	... .	....
" " " ...	1870	.....	....	.....
" " " ...	1871	30,148 32	....	.....
" " " ...	1872	489,428 16	....	. .....
" " " ...	1873	561,818 44	.....	..... .
" " " ...	1874	310,224 88	....	. .....
" " " ...	1875	1,546,241 67	.....	... .
" " " ...	1876	3,346,567 06	....	.....
" " " ...	1877	1,691,149 97	.....	....
" " " ...	1878	2,228,373 13	....	.....
" " " ...	1879	2,240,285 47	....	.. ..
" " " ...	1880	4,044,522 72	78,892 01	104,975 69
" " " ...	1881	4,968,503 93	236,944 98	291,498 06
" " " ...	1882	(1) 4,589,075 79	1,786 20	....
" " " ...	1883	(2) 10,033,800 04	266 09	....
" " " ...	1884	(3) 11,192,722 02	327 02	.....
" " " ...	1885	(4) 9,900,281 53	.....	.....
" " " ...	1886	(5) 3,672,584 81	.....	....
" " " ...	1887	(6) 915,057 49	... .	.....
" " " ...	1888	52,098 65	.....	.. ..
" " " ...	1889	86,716 07	.....	.....
" " " ...	1890	40,980 54	... ...	.....
" " " ...	1891	37,367 00	....	.. . .
" " " ...	1892	66,211 39	.....	....
" " " ...	1893	413,836 49	....	.....
" " " ...	1894	146,539 87	....	. ...
" " " ...	1895	49,209 77	.. ..	....
" " " ...	1896	65,669 49	.....	.....
" " " ...	1897	14,054 50	....	. .. .
" " " ...	1898	692 17	....	.....
" " " ...	1899	8,418 53	....	....
" " " ...	1900	236 11	.....	.....
" " " ...	1901	8,978 87	.....	..... .
" " " ...	1902	448 70	....	.....
" " " ...	1903	.....	....	.....
" " " ...	1904	33,076 39	.....	....
Total.....	....	*62,785,319 97	318,216 30	396,473 75

* Agrees with Public Accounts Balance Sheet, 1903-1904, page 8.

(1) Including..... .....$ 2,210,000 00 on account subsidy.
(2) " ..... 5,323,076 60 "
(3) " ... . 7,254,208 27 "
(4) " ..... 6,862,201 00 "
(5) " .... 2,890,427 00 "
(6) " ..... 460,087 13 "

†$25,000,000 00

† *See* also Statement No. 3, page 49, for the expenditure.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Income Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
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" " "	1888		
" " "	1889	9,847 27	
" " "	1890	381,942 75	
" " "	1891	196,869 36	
" " "	1892	26,129 89	
" " "	1893	2,190 62	
" " "	1894	1,675 36	
" " "	1895	570 55	
" " "	1896		
" " "	1897	41,457 29	
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		8,381 82
" " "	1902		
" " "	1903		
" " "	1904		
Total		*660,683 09	8,381 82

* Of this amount Parliament voted under 52 Vic., chap. 8, the sum of $500,000 as a subsidy to the Western Counties Railway.

S. LEONARD SHANNON.
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

DRUMMOND COUNTY RAILWAY.

——	Year.	Construction.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	1868		
" since "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
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" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900	1,459,000 00	
" " "	1901		
" " "	1902	5,000 00	
" " "	1903		
" " "	1904		
Total		*1,464,000 00	

*Included in total cost of Intercolonial Railway system, page 33.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

YUKON TERRITORY WORKS.

(Stikine Teslin Railway.)

	Year.	Construction.
		$ cts.
Government expenditure prior to Confederation	1868	
" since "	1869	
" " "	1870	
" " "	1871	
" " "	1872	
" " "	1873	
" " "	1874	
" " "	1875	
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" " "	1893	
" " "	1894	
" " "	1895	
" " "	1896	
" " "	1897	
" " "	1898	
" " "	1899	
" " "	1900	
" " "	1901	
" " "	1902	283,323 55
" " "	1903	
" " "	1904	
Total		*283,323 55

* Agrees with Public Accounts Balance Sheet, 1903-1904, page 8.

S. LEONARD SHANNON,
Accountant.

Department of Railways and Canals,
Ottawa, October 31, 1904.

STATEMENTS OF THE ACCOUNTANT.

National Transcontinental Railway.

	Year.	Construction.
		$ cts.
Government expenditure prior to Confederation		
" since "	1868	
" " "	1869	
" " "	1870	
" " "	1871	
" " "	1872	
" " "	1873	
" " "	1874	
" " "	1875	
" " "	1876	
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" " "	1894	
" " "	1895	
" " "	1896	
" " "	1897	
" " "	1898	
" " "	1899	
" " "	1900	
" " "	1901	
" " "	1902	
" " "	1903	
" " "	1904	6,249 40
Total		6,249 40

* Agrees with Public Accounts Balance Sheet, 1903-1904, page 8.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

STATEMENT showing amount expended on Capital Account on Railways.

Railways.	$ cts.	$ cts.
Intercolonial	63,804,207 92	
Cape Breton	3,860,679 14	
Oxford and New Glasgow	1,949,063 21	
Eastern Extension	1,324,042 81	
Drummond County	1,464,000 00	
Montreal and European Short Line	333,942 72	
		72,735,935 80
Carleton Branch		48,410 18
Prince Edward Island		6,128,116 80
Canadian Pacific		62,785,319 97
Annapolis and Digby		660,683 09
Yukon Territory Works (Stikine-Teslin Ry)		283,323 55
National Transcontinental		6,249 40
Total		142,648,039 09

Memo. re Recapitulation—Railways.

Total cost as per statement above	142,648,039 09
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, see statement, page 33	296,872 90
Agreeing with total cost of construction, as per statement, page 46	142,944,911 99

S. LEONARD SHANNON
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

RECAPITULATION—RAILWAYS.

	Year.	Construction.	Working Expenses.	Revenue.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	13,881,460 65	....	....
" since "	1868	483,353 65	359,961 08	420,752 58
" " "	1869	282,615 18	387,548 47	455,022 76
" " "	1870	1,729,381 49	445,208 75	471,245 09
" " "	1871	2,946,930 45	442,993 31	565,713 52
" " "	1872	5,620,569 67	595,076 22	622,900 56
" " "	1873	5,763,268 81	1,011,892 60	703,458 26
" " "	1874	3,925,123 69	1,847,925 24	893,430 17
" " "	1875	5,018,427 85	1,581,934 24	886,087 42
" " "	1876	4,497,434 75	1,497,128 22	966,922 42
" " "	1877	3,209,502 16	1,890,268 80	1,285,110 27
" " "	1878	2,643,741 73	2,032,873 05	1,514,846 38
" " "	1879	2,507,053 71	2,233,496 34	1,419,955 60
" " "	1880	6,109,077 14	1,851,489 26	1,739,137 25
" " "	1881	5,577,236 73	2,220,421 39	2,200,486 25
" " "	1882	5,175,046 61	2,310,638 54	2,237,583 39
" " "	1883	11,707 619 02	2,636,551 70	2,541,205 41
" " "	1884	14,013,074 89	2,613,508 87	2,551,937 97
" " "	1885	11,224,244 54	2,749,710 53	2,624,243 07
" " "	1886	4,443,220 17	2,819,973 50	2,628,336 35
" " "	1887	1,846,887 18	3,152,650 40	2,840,747 88
" " "	1888	1,765,582 11	3,621,076 62	3,166,253 22
" " "	1889	2,709,857 37	3,513,063 67	3,167,542 67
" " "	1890	2,392,767 99	3,846,044 42	3,203,874 11
" " "	1891	1,184,317 34	3,949,263 73	3,181,888 56
" " "	1892	417,425 73	3,748,597 77	3,136,393 51
" " "	1893	712,917 44	3,288,629 62	3,262,505 62
" " "	1894	585,749 01	3,226,208 13	3,179,019 57
" " "	1895	376,814 83	3,197,846 17	3,129,450 37
" " "	1896	324,774 72	3,254,442 64	3,140,678 47
" " "	1897	204,624 31	3,195,959 58	3,060,074 38
" " "	1898	270,990 85	3,507,248 88	3,313,847 10
" " "	1899	1,112,348 47	3,696,612 31	3,940,570 11
" " "	1900	3,309,130 42	4,665,228 06	4,774,161 87
" " "	1901	3,922,989 37	5,739,051 54	5,213,381 24
" " "	1902	5,386,611 24	5,861,099 54	5,918,990 43
" " "	1903	3,083,680 86	6,474,134 20	6,584,598 77
" " "	1904	2,619,059 86	7,599,958 57	6,627,255 51
Total	.....	*142,984,911 99	107,065,715 96	97,569,608 11

*Total amount paid on construction..... .. ..$142,984,911 99
Less amount received from the City of St. John, N.B., as purchase of the Carleton Branch Railway.... .... 40,000 00

Total cost of construction..... .. ..†$142,944,911 99

†Agreeing with amount expended on capital, see page 45.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904,

STATEMENT showing Miscellaneous Expenditure, yearly, by the Department of Railways and Canals.

Year ending June 30.	CHARGEABLE TO INCOME.			CHARGEABLE TO REVENUE.			Total, Yearly Expenditure
	Canals.	Railways.	General.	Canals.	Railways.	General.	
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1868			6,305 66	12,000 00		2,416 66	20,722 32
1869			8,367 52	12,000 00		1,000 00	21,367 52
1870			7,853 03	18,698 89		7,679 78	34,231 70
1871			34,773 72	12,018 98			46,792 70
1872			20,049 50	12,208 76			32,258 26
1873			36,891 74	12,099 44		6,889 20	55,880 38
1874			40,098 84	12,959 25		5,428 98	58,487 07
1875			35,579 24	12,047 43		5,620 17	53,246 84
1876			42,920 10	86 08		5,690 28	48,696 46
1877				51 87	43,639 97		43,691 84
1878	1,860 00			556 00		34,388 59	36,804 59
1879							
1880	2,561 55			323 16			2,884 71
1881	2,338 41			5,535 22			7,873 63
1882				9,826 23			9,826 23
1883	11,781 27			6,978 54			18,759 81
1884	7,486 62	62,256 58		8,305 41			78,048 61
1885	16,725 47	11,003 38		1,210 61			28,939 46
1886	20,323 62	10,383 59		776 30			31,483 51
1887	20,873 21	23,545 34		649 04			45,067 59
1888	34,533 07	22,898 90		5,799 83			63,231 80
1889	10,091 87	16,552 64		5,207 64			31,852 15
1890	16,426 69	50,909 74		49,550 21			116,886 64
1891	16,925 31	16,314 41		56,922 05			90,161 77
1892	6,540 49	19,062 51		65,074 07			90,677 07
1893	8,498 41	4,313 73	28,640 93	63,965 54			105,418 61
1894	4,178 85	4,855 11	15,746 31	60,265 22			85,045 49
1895	10,695 48	13,221 27	19,304 87	60,769 56			103,991 18
1896	10,893 40	6,562 20	25,194 21	70,340 22			112,990 03
1897	2,937 47	5,118 99	25,142 90	62,777 12		597 39	96,573 87
1898	1,719 69	8,327 96	28,042 10	56,284 42	1,400 00		95,774 17
1899	1,318 79	67,005 86	22,085 19	66,850 29			157,260 13
1900	11,873 35	33,496 99	22,802 18	58,836 57			127,009 09
1901	12,267 99	28,658 78	33,986 68	61,938 61			136,852 06
1902	3,658 23	21,752 58	34,138 50	65,770 65			125,319 96
1903	2,491 84	15,570 43	35,398 00	63,175 19			116,635 46
1904	3,730 79	85,353 17	36,262 32	66,067 30			191,413 58
	242,731 87	527,164 16	559,583 54	1,077,925 70	45,039 97	69,711 05	2,522,156 29

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1904.

RECAPITULATION—RAILWAYS AND CANALS, TO JUNE 30, 1904.

Expenditure.

Chargeable to Capital Account—			
Railways, *see* Statement page 45		$ 142,648,039 09	
Canals " " 28		87,223,164 67	
			$ 229,871,203 76
Chargeable to Consolidated Fund—			
* Railway Subsidies as per Statement No. 3, page 49		$ 31,341,931 16	
Income Account—			
Intercolonial Railway, *see* page 32	$ 280,000 00		
Add transferred from Capital " 33	296,872 90		
Railways " 47	527,164 16		
Canals " 28	3,661,085 64		
" " 47	242,731 87		
General, Railways and Canals " 47	559,583 54		
		5,567,438 11	
Revenue Account—			
Canals—Operating and maintaining Staff, *see* page 28	$ 9,022,018 85		
Canals—Repairs, *see* page 28	7,086,627 87		
" " 47	1,077,925 70		
Railways—Working Expenses, *see* page 46	107,065,715 96		
" " 47	45,039 97		
General—Railways and Canals " 47	69,711 05		
		124,367,039 40	
			161,276,408 67
Total expenditure on Railways and Canals			$ 391,147,612 43

EXPENDITURE AS ABOVE, SEPARATED AS BETWEEN RAILWAYS AND CANALS.

Railways.

Capital Account	$ 142,648,039 09	
Consolidated Fund	139,556,724 15	
		$ 282,204,763 24

Canals.

Capital Account	$ 87,223,164 67	
Consolidated Fund	21,090,389 93	
		108,313,554 60

General, Common to both.

Consolidated Fund	629,294 59
Total expenditure on Railways and Canals	$ 391,147,612 43

Revenue.

Railways—Revenue received from July 1, 1867, to June 30, 1903, (for details *see* page 46)	$ 97,569,608 11
Canals " " " " " 28)	13,327,506 35
Total Revenue, Railways and Canals	$ 110,897,114 46

* This amount does not include the subsidy of $25,000,000 to the Canadian Pacific Railway, nor the amount $660,683.09 expended on the Annapolis and Digby Railway, both of which are included in Capital Account, nor the annual payment of $119,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of $2,394,000 granted by 47 Vic., ch. 8 (1884) for the line between Ottawa and Quebec, which sum was transferred to the Public Debt as a liability, and is dealt with by the Finance Department, *see* Public Accounts, 1898-99, page x.

S. LEONARD SHANNON,
Accountant.

Department of Railways and Canals,
Ottawa, October 31, 1904.

PART III

RAILWAY SUBSIDIES

No. 1.

RAILWAY SUBSIDIES.

TABLE of per mile Cash Subsidies paid in aid of Railway Construction, showing amount of Subsidy granted for same Railways.

Number.	Name of Railway.	No. of miles built up to June 30, 1904.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1904.	Subsidy paid to June 30, 1904.	Subsidy paid to September 30, 1904.
				$ cts.	$ cts.	$ cts.
1	Albert Southern	16	16	50,460 00	50,460 00	50,460 00
2	†Atlantic and Lake Superior	30	30	165,734 00	104,153 98	104,153 98
3	†Algoma Central and Hudson Bay	77	91	748,800 00	583,536 00	583,536 00
4	Baie des Chaleurs	70	70	620,000 00	620,000 00	620,000 00
5	Baie of Quinté	15	35	112,000 00	69,120 00	69,120 00
6	Beauharnois Junction	19·50	19·50	62,400 00	62,400 00	62,400 00
7	Belleville and North Hastings	6·84	6·84	21,888 00	21,888 00	21,888 00
8	Brantford, Waterloo and Lake Erie	18	18	57,600 00	57,600 00	57,600 00
9	Brockville, Westport and Sault Ste. Marie	44·50	44.50	105,200 00	105,200 00	105,200 00
10	Bruce Mines and Algoma	9	9	28,800 00	28,800 00	28,800 00
11	Buctouche and Moncton	31 75	31·75	101,600 00	101,600 00	101,600 00
12	Canada Atlantic	54·05	54·05	282,355 20	282,355 20	282,355 20
13	Canada Central	120	120	1,525,250 00	1,525,250 00	1,525,250 00
14	†Canada Eastern	107	107	350,400 00	350,400 00	350,400 00
15	†Canadian Pacific	1,905	1,905	25,000,000 00	25,000,000 00	25,000,000 00
16	" (extension)*	676	695·83	5,815,696 00	5,753,493 85	5,753,493 85
17	†Cape Breton extension	30	30	191,595 00	182,400 00	182,400 00
18	Caraquet	67	67	224,000 00	224,000 00	224,000 00
19	Central (of New Brunswick)	45·66	89·50	238,400 00	142,400 00	142,400 00
20	Cornwallis Valley	14	14	44,800 00	44,800 00	44,800 00
21	Columbia and Kootenay	27·75	27·75	88,800 00	88,800 00	88,800 00
22	†Canadian Northern	490	490	2,048,000 00	1,909,132 00	1,909,132 00
23	Chateauguay and Northern	36·04	58	265,744 60	191,595 00	191,595 00
24	Cap de la Madeleine	2·32	2·32	7,424 00	7,424 00	7,424 00
25	†Coast of Nova Scotia (now Halifax and Yarmouth)	50	61	160,000 00	160,000 00	160,000 00
26	†Central Ontario	21	21	67,200 00	67,200 00	67,200 00
27	Cumberland	14	14	39,850 00	39,850 00	39,850 00
28	Dominion Lime Co	4·80	4·80	15,360 00	15,360 00	15,360 00
29	Dominion Coal Co	27·44	27·44	87,808 00	87,808 00	87,808 00
30	†Drummond Counties	133·00	135·60	423,936 00	423,936 00	423,936 00
31	†East Richelieu Valley	21·86	21·86	69,952 00	69,952 00	69,952 00
32	Elgin, Petitcodiac and Havelock	12	12	38,400 00	38,400 00	38,400 00
33	Erie and Huron	30	30	96,000 00	96,000 00	96,000 00
34	Esquimalt and Nanaimo	71	71	750,000 00	750,000 00	750,000 00
35	Fredericton and St. Mary's Bridge Co	1·33	1·33	30,000 00	30,000 00	30,000 00
36	Grand Trunk, Georgian Bay and Lake Erie	12·42	12·42	39,744 00	39,744 00	39,744 00
37	Grand Trunk	Bridge.	Bridge.	500,000 00	500,000 00	500,000 00
38	Great Eastern	12·50	12·50	40,345 00	40,345 00	40,345 00
39	†Great Northern	140·42	143·59	557,788 31	557,788 31	557,788 31
40	Guelph Junction	15·25	15·25	46,000 00	46,000 00	46,000 00
41	†Gulf Shore	16·78	16·78	53.699 20	53,699 20	53,699 20
	Carried forward	4,496·21	4,632·61	41,173,028 71	40,522,890 54	40,522,890 54

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.—*Continued.*

Number.	Name of Railway.	No. of miles built up to June 30, 1904.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1904.	Subsidy paid to June 30, 1904.	Subsidy paid to September 30, 1904.
				$ cts.	$ cts.	$ cts.
	Brought forward....	4,496·21	4,632·61	41,173,028 71	40,522,890 54	40,522,890 54
42	Halifax and South Western	50	231	739,200 00	185,422 00	185,422 00
43	Harvey Branch	3	3	5,553 57	5,553 57	5,553 57
44	Hereford	48·50	48·50	155,200 00	155,200 00	155,200 00
45	Irondale, Bancroft & Ottawa	45	45	144,000 00	144,000 00	144,000 00
46	International (Quebec)	49	49	156,800 00	156,800 00	156,800 00
47	International (N.B.), formerly Restigouche and Western	15	20	100,180 00	77,138 00	77,138 00
48	†Inverness Ry. & Coal Co	60·97	98	390,208 00	368,545 97	368,545 97
49	Joggins	12	12	37,500 00	37,500 00	37,500 00
50	Kingston and Pembroke	15	15	48,000 00	48,000 00	48,000 00
51	Kingston, Napanee and Western	61·35	61·35	208,732 80	208,732 80	208,732 80
52	L'Assomption	3·50	3·50	11,200 00	11,200 00	11,200 00
53	†Lake Erie and Detroit River	126·90	128·05	475,851 00	475,851 00	475,851 00
54	Lake Temiscamingue Colonization	45·84	45·84	310,335 95	310,335 95	310,335 95
55	Leamington and Lake St. Clair	16	16	51,200 00	51,200 00	51,200 00
56	Lindsay, Bobcaygeon and Pontypool	38·70	38·70	123,840 00		123,840 00
57	Lotbinière and Megantic	30	30	96,000 00	96,000 00	96,000 00
58	Manitoulin and North Shore	12·60	12·60	204,800 00	32,000 00	32,000 00
59	Montreal & Sorel (now South Shore)	61·50	126·67	517,541 92	293,541 92	293,541 92
60	Montreal and Lake Champlain	83	83	103,600 00	103,600 00	103,600 00
61	Montreal and Western	70	70	361,270 00	361,270 00	361,270 00
62	Montreal and Lake Maskinongé	12·90	12·90	41,280 00	41,280 00	41,280 00
63	Montreal and Ottawa	60	60	192,000 00	192,000 00	192,000 00
64	†Montreal and Province Line	18·3	18·3	58,560 00	58,560 00	58,560 00
65	Montfort Colonization	32·29	32·20	167,440 00	167,440 00	167,440 00
66	Maganetawan River	1·11	1·11	3,552 00	3,552 00	3,552 00
67	†Massawippi Valley	1·68	1·68	5,376 00	5,376 00	5,376 00
68	†Midland (Nova Scotia)	57·18	58	365,418 00	362,200 30	362,200 30
69	Nakusp and Slocan	36·80	36·80	117,760 00	117,760 00	117,760 00
70	New Brunswick and P. E. Island	35·45	35·45	113,440 00	113,440 00	113,440 00
71	New Brunswick Coal and Ry	15	45	144,000 00	48,000 00	48,000 00
72	New Glasgow Iron and Coal Co	12·45	12·45	39,840 00	39,840 00	39,840 00
73	Northern Colonization	20·90	22	80,000 00	58,384 00	58,384 00
74	Northern Pacific Junction	110	110	1,320,000 00	1,320,000 00	1,320,000 00
75	Nova Scotia Central	73·50	73·50	235,200 00	235,200 00	235,200 00
76	Ontario, Belmont and Northern	9·60	9·60	30,720 00	30,720 00	30,720 00
77	Ontario and Quebec	61·25	61·25	196,000 00	196,000 00	196,000 00
78	Orford Mountain	26·50	26·50	84,800 00	84,800 00	84,800 00
79	Oshawa Railway and Navigation Co	7	7	22,400 00	22,400 00	22,400 00
80	†Ottawa, Northern and Western (formerly Ottawa & Gatineau Valley)	82·28	86	410,688 00	410,688 00	410,688 00
81	†Ottawa and New York	53·87	53·87	262,384 00	262,384 00	262,384 00
82	†Ottawa, Arnprior and Parry Sound	159·58	159·58	779,712 00	779,712 00	779,712 00
83	Parry Sound Colonization	47·75	47·75	152,800 00	152,800 00	152,800 00
84	Pontiac and Pacific Junction	70	70	193,578 00	193,578 00	193,578 00
85	†Phillipsburg Junction	7·41	7·41	23,712 00	23,712 00	23,712 00
86	Pontiac and Renfrew	4·25	4·25	13,600 00	13,600 00	13,600 00
87	Pontiac and Pacific and Ottawa and Gatineau	Bridge.	Bridge.	212,500 00	212,500 00	212,500 00
88	†Pembroke Southern	20	20	64,000 00	64,000 00	64,000 00
89	Port Arthur, Duluth and Renfrew	84·75	84·75	271,200 00	271,200 00	271,200 00
90	Quebec Central	74·86	74·86	348,342 00	348,342 00	348,342 00
91	Quebec Bridge Co	Bridge.	Bridge.	374,353 33	374,353 33	374,353 33
92	Quebec and Lake St. John	245·85	245·85	1,006,743 50	1,006,743 00	1,006,743 50
93	Quebec, Montmorency & Charlevoix	30	30	96,000 00	96,000 00	96,000 00
94	Shuswap and Okanagan	51	51	163,200 00	163,200 00	163,200 00
95	South Norfolk	17	17	54,400 00	54,400 00	54,400 00
96	St. Catharines and Niagara Central	12	12	38,400 00	38,400 00	38,400 00
	Carried forward	6,896 49	7,357·88	53,097,440 78	51,207,346 88	51,331,186 88

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.—*Concluded.*

Number.	Name of Railway.	No of miles built up to June 30, 1904.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1904.	Subsidy paid to June 30, 1904.	Subsidy paid to September 30, 1904.
				$ cts.	$ cts.	$ cts.
	Brought forward	6,896·49	7,357·88	53,097,440 78	51,207,346 88	51,331,186 88
97	St. Clair Frontier Tunnel	2·23	2·23	375,000 00	375,000 00	375,000 00
98	St. Lawrence and Lower Laurentian	38·85	38·85	217,600 00	217,600 00	217,600 00
99	St. Louis, Richibucto & Buctouche	7	7	22,400 00	22,400 00	22,400 00
100	†St. Lawrence and Adirondack	33·51	33·51	149,481·60	149,481 60	149,481 60
101	†St. Mary River	44	46	126,200 00	115,960 00	115,960 00
102	St. Stephen and Milltown	4·64	4·64	14,848 00	14,848 00	14,848 00
103	Schomberg and Aurora	14·42	14·42	46,144 00	46,144 00	46,144 00
104	Temiscouata	112·95	112·95	645,950 00	645,950 00	645,950 00
105	†Thousand Islands	5·19	5·19	29,840 00	29,840 00	29,840 00
106	†Tilsonburg, Lake Erie and Pacific	33·96	47·50	117,431 48	117,431 48	117,431 48
107	Tobique Valley	27·88	27·88	134,016 00	134,016 00	134,016 00
108	Toronto, Grey and Bruce	4·58	4·58	14,656 00	14,656 00	14,656 00
109	†United Counties	59	59	188,816 00	188,816 00	188,816 00
110	Waterloo Junction	10·25	10·25	32,800 00	32,800 00	32,800 00
111	Western Counties	20	20	500,000 00	500,000 00	500,000 00
112	West Ontario Pacific	18·75	18·75	60,000 00	60,000 00	60,000 00
113	†York and Carleton	5·73	5·73	18,336 00	18,336 00	18,336 00
	Total	7,339·43	7,816·36	55,790,959 86	53,890,625 96	54,014,465 96

‡Add subsidy of used rails as per statement, part iii., page 7, $152,305.20, and Atlantic and North-Western, $2,799,000, less subsidy Canadian Pacific Railway, main line, $25,000,000, and Western Counties Railway, $500,000, which will then agree with statement of subsidies in part ii, page 48 viz., $31,341,931.16.

* Includes the mileage of the North Shore Railway, 160 miles.

† By 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, 1 Edward VII., cap. 7, 3 Edward VII., cap. 57, and 4 Edward VII., cap. 34, a subsidy was authorized on certain mileage of this railway, specified in the Act of Parliament, of $3,200 per mile and a further subsidy beyond the sum of $3,200 per mile, of 50 per cent on so much of the *average cost* of the said specified mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile.

The amount of certain of the subsidies authorized by Parliament, given in this statement, includes the determined portion of the subsidies under 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, and 1 Edward VII., cap. 7, 3 Edward VII., cap. 57, and 4 Edward VII., cap. 34, viz.: The amount produced by the $3,200 per mile, but the other portion is now an undetermined amount, and therefore cannot be shown here.

STATEMENT showing Railways receiving Cash Subsidies of fixed amounts, payable Annually or Semi-annually for fixed periods of years.

No.	Name of Railway.	Miles Subsidized.	Amount of Instalment.	Amount paid up to June 30, 1904.
				$ cts.
1	International (Atlantic and North-west Railway Co	252	$93,300 per ½ year for 20 years.	2,799,000.
2	Kingston, Smith's Falls and Ottawa Railway Co	56	$ 3,136 " 21 "	Nil.
	Total	308		2,799,000.

STATEMENT showing Railways aided by the Grant of Loans.

No.	Name of Railway	Amount of Loans authorized.	Amount loaned.
		$	$ cts.
1	Albert Railway Co.	15,000	14,725 56
2	Fredericton and St. Mary's Bridge Co.	300,000	300,000 00
3	St. John Bridge and Railway Extension Co.	500,000	433,900 00
	Total	815,000	748,625 56

STATEMENT showing Railways subsidized by the Grant of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Subsidy on value of Rails.	Subsidy on used Rails paid.
			$ cts.	$ cts.
1	Central Railway Co. of New Brunswick	4,052	83,612 54	83,612 54
2	Elgin, Petitcodiac and Havelock Ry. Co.	2,201	44,252 82	44,252 82
3	Chatham Branch Railway Co.	958	24,439 84	24,439 84
	Total	7,211	152,305 20	152,305 20

STATEMENT showing Railways aided by the Loan of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Value of used Rails loaned	Remarks.
			$ cts.	
1	Kent Northern Railway Co.	2,549	58,334 27	By 51 Victoria, chapter 3, these used rails will be granted as a subsidy, (the section of road to be first laid with new steel rails weighing not less than 50 lbs. per lin. yard and after an O.C. had been passed authorizing transfer.)
2	Halifax Cotton Co.	233	4,335 00	
3	Steel Company of Canada	597	11,964 66	
4	Albert Railway Company	726	14,665 45	
	Total	4,105	89,299 38	

No. 2

LIST OF RAILWAY SUBSIDY ACTS PASSED IN EACH YEAR.

NOTE.—The marginal number opposite each subsidy has reference to the alphabetical list in the Deputy Minister's report showing the action taken in cases where a contract for work has been made with any company.

By the Acts of Parliament below specified, authority has been placed in the hands of the Governor in Council to grant, upon certain conditions, aid towards the construction of various lines of railway throughout the Dominion, as follows, namely :—

By the Acts of 45 Vic., cap. 14, 1882 *(Assented to 17th May, 1882)* :—

1. For a railway from Gravenhurst to Callander, both in the province of Ontario, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole $60,000

2. For a railway from St. Raymond to Lake St. John, both in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 384,000

3. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, or between them, to Edmundston, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 240,000

4. For a railway from Oxford to New Glasgow, both in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 224,000

"The said subsidies to be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to complete the said railways respectively, within a reasonable time, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in an agreement to be made by the company with the Government, and which the Government is empowered to make, and to be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, such proportion to be established by the report of the said Minister; provided always, that the granting of such bonuses or subsidies shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting therewith, as the Governor in Council may determine."

By the special Act 45 Vic., cap. 55, 1882 *(Assented to 17th May, 1882* :—

5. A subsidy authorized in favour of "The Chignecto Marine Transport Railway Company," provided that they construct and thereafter maintain and operate a ship railway, to be approved by the Government, across the Isthmus of Chignecto, from the Gulf of St. Lawrence to the Bay of Fundy, per year, for twenty-five years..... $150,000

By the Act 46 Vic., cap. 25, 1883 *(Assented to 25th May, 1883)*:—

6. To the Baie des Chaleurs Railway Company, for 100 miles of their railway, from Métapediac, on the Intercolonial Railway, to Paspebiac, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 320,000

7. To the Caraquet Railway Company, for 36 miles of their railway, from a point near Bathurst to Caraquet, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $115,200

8. To the Gatineau Valley Railway Company, for the first 50-mile section of their railway, from Hull station, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 160,000

9. To the Great American and European Short Line Railway Company, for 80 miles of their railway, from Canso to Louisburg or Sydney, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 256,000

10. To the International Railway Company, for 49 miles of their railway, from Sherbrooke, in the province of Quebec, to the international boundary line, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 156,800

11. To the Northern and Western Railway Company, for 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy village, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 102,400

12. To the Montreal and Western Railway Company, for the first 50-mile section of their railway, out of St. Jérôme, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 160,000

13. To the Napanee, Tamworth and Quebec Railway Company, for 28 miles of their railway, from Napanee to Tamworth, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 89,600

14. To the Quebec and Lake St. John Railway Company, for 25 miles of their railway, from St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 80,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

15. For a railway from the International Railway at Petitcodiac to Havelock Corner, in the province of New Brunswick, 12 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

16. For a railway from Gravenhurst to Callander, 110 miles, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole 660,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

"The nine subsidies first mentioned to be granted to the companies hereinbefore named respectively; and the two subsidies last mentioned to be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to complete the said railways, respectively; and all the eleven lines above mentioned, and also the lines of railway in respect of which it is provided by the Act of forty-fifth Victoria, chapter fourteen, that subsidies may be granted, shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years from and after the passing of this Act, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made by each company with the Government, and which the Government is empowered to make; and all the said subsidies authorized by this Act, respectively, to be paid out of the Consolidated Revenue Fund of Canada by instalments, on the completion of each section of not less than ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, to be established by the report of the said Minister; Provided always, that the granting of such subsidies shall be subject to such conditions for securing such running powers

or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine."

By the special Act 46 Vic., cap. 26, 1883 *(Assented to 25th May, 1883)*:—

17. An advance authorized in favour of the "St. John Bridge and Railway Extension Company," to enable them to build a railway bridge across the River St. John, N.B., with railway connection with the Intercolonial, such advance to be secured by a mortgage on their entire property, not to exceed 80 per cent of the expenditure on the work, nor a total sum of ..... $ 500,000

By the Act 47 Vic., cap. 8, 1884 *(Assented to 19th April, 1884)*:—

18. To the Government of the province of Quebec, in consideration of their having constructed the railway from Quebec to Ottawa, forming a connecting line between the Atlantic and Pacific coasts via the Intercolonial and Canadian Pacific Railways, and being as such a work of national and not merely provincial utility, a subsidy not exceeding $6,000 per mile for the portion between Quebec and Montreal, 159 miles, nor exceeding in the whole 954,000

19. And for the portion between Montreal and Ottawa, 120 miles, $12,000 per mile, nor exceeding in the whole 1,440,000

20. For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding $170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work.

21. For the construction of a line of railway from Oxford station, on the Intercolonial Railway, to Sydney or Louisburg, a subsidy not exceeding $30,000 per annum for fifteen years or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work, in addition to the subsidies previously granted, and also a lease or transfer to such company of the Eastern Extension Railway, from New Glasgow to Canso, with its present equipment.

22. To the Quebec Central Railway Company, for a line of railway from Beauce Junction to the international boundary line, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 211,200

23. For the extension of the Canadian Pacific Railway, from its terminus at St. Martin's Junction, near Montreal, or some other point on the Canadian Pacific Railway, to the harbour of Quebec, in such manner as may be approved by the Governor in Council, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole 960,000

24. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway to the village of Bancroft, in the township of Dungannon, county of Hastings, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 160,000

25. To the Pontiac Pacific Junction Railway, for a line of railway from Hull or Aylmer to Pembroke, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 272,000

26. To the Gatineau Railway Company, for a line of railway from Kazuabazua to Le Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 160,000

27. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth to Bogart and Bridgewater, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 70,400

28. To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last session of Parliament, towards Le Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $160,000

29. To the Northern and Western Railway Company, for a line of railway from Fredericton to the Miramichi River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883) 128,000

30. To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

31. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 262,400

32. To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000

33. To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000

34. For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole 200,000

35. For a line of railway from Richibucto to St. Louis, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400

36. For a line of railway from Hopewell to Alma, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200

37. For a line of railway from St. Andrew's to Lachute, in the county of Argenteuil, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400

38. For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 217,600

39. For a line of railway from Annapolis to Digby, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000

40. For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway between Sussex and St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 128,000

41. To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbour, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 76,800

42. For a branch of the Intercolonial Railway, from Metapediac eastward towards Paspebiac, twenty miles, in the province of Quebec, a sum not exceeding in the whole 300,000

43. For a branch of the Intercolonial Railway, from Derby Station to Indiantown, fourteen miles, a sum not exceeding in the whole 140,000

" The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively ; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are

granted shall be commenced within two years from the first day of July next and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, except the line mentioned in the fourth section of this Act,* which shall be commenced within one year, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make ; the location also of every such line of railway shall be subject to the approval of the Governor in Council ; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister. The subsidies to the province of Quebec shall be capitalized, and the interest shall be payable at such time and in such manner as the Government of Canada shall agree upon with the Government of the said province. The two subsidies last mentioned in the list are for works to be constructed by the Government of Canada.

"Provided, always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By the special Act 47 Vic., cap. 6, 1884 *(Assented to 19th April, 1884)* :

44. Relating to an agreement with the province of British Columbia, authority was given, *inter alia*, for the grant of a subsidy to the "Esquimalt and Nanaimo Railway Company" in aid of the construction of a line of railway and telegraph between the points named ; such subsidy to be in lands *en bloc* on Vancouver Island, the boundaries being fixed by the Act, and in money $750,000

By the Act 48-49 Vic., cap. 59, 1885 *(Assented to 20th July, 1885)* :

45. To the Ottawa, Waddington and New York Railway and Bridge Company, for a line of railway from Ottawa to Waddington, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 166,400

46. To the New Brunswick and Prince Edward Island Railway Company, for a line of railway from Sackville to the Straits of Northumberland, at or near Cape Tormentine, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 118,400

47. To the Montreal and Sorel Railway Company, for a line of railway from St. Lambert to Sorel, a subsidy not exceeding $1,600 per mile, nor exceeding in the whole..... 72,000

48. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a line of railway from Brockville to Westport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000

49. To the Quebec and Lake St. John Railway Company, for a line of railway from its junction on the North Shore Railway to St. Raymond, upon condition of the company extending their road to a point 50 miles north of St. Raymond, a subsidy not exceeding $3,200 per mile nor exceeding in the whole..... 96,000

50. To the Northern and Western Railway Company, for a line of railway from the northern end of the 40 miles subsidized between Fredericton and the Miramichi River by 47 Victoria, chapter 8, to Boiestown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200

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* The extension of the Canadian Pacific Railway from its terminus at St. Martin's Junction, or some other point on the said railway to the harbour of Quebec.

51. To the Montreal and Champlain Junction Railway Company, for a line of railway from Brosseau's to Dundee, a subsidy not exceeding $500 per mile, nor exceeding in the whole $30,000

52. To the Thunder Bay Colonization Railway Company, for a line of railway from the Murillo station of the Canadian Pacific Railway to the east end of Whitefish Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 92,000

53. To the Central Ontario Railway Company, for a line of railway from Coe Hill or Rathbun, to Bancroft, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

54. To the Belleville and North Hastings Railway Company, for a line of railway from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, a subsidy not exceeding $1,500 per mile, nor exceeding in the whole 10,500

55. For a line of railway from Long Sault to the foot of Lake Temiscamingue, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 25,600

56. For a line of railway from a point on the Canada Southern Railway near Comber, to Lake Erie, at or near the village of Leamington, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.... 44,800

57. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth towards Bogart and Bridgewater, 16 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy of..... 70,000

58. To the Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of 62 miles, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, a subsidy of.... 320,000

59. For a line of railway from the Grand Piles, on the River St. Maurice, to its junction with Lake St. John Railway, a distance of about 50 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, for a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy of..... 217,600

60. To the Canada Atlantic Railway Company, for a line of railway from Valleyfield to a point one and a half miles west of Johnston's, a subsidy not exceeding $1,600 per mile, and from one and a half miles west of Johnston's to Lacolle; also from the present terminus at Ottawa, to the Chaudiere Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

61. For a line of railway from Indiantown via the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 140,800

" The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions, specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister.

"Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connected with those so subsidized, as the Governor in Council may determine."

By the Act 48-49 Vic., cap. 58, 1885 *(Assented to 20th July, 1885)*:—

62. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, to Edmundston, in the province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act forty-fifth Victoria, chapter fourteen, and constituting with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

63. For a line of railway from the south bank of the St. Lawrence river, opposite or near Montreal, to the harbours of St. Andrew's, St. John and Halifax, via Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such a line of railway for a period of twenty years, or a guarantee bond of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway.

64. The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montreal, or from some other point on their railway to be selected by the said company, to the harbour of Quebec, in such a manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act, to aid in procuring the extension of

the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada.

The said Act further provided as follows in relation to this matter :—

"If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligation as the Government shall have assumed in acquiring it."

By the Act 49 Vic., cap. 10, 1886 (*Assented to 2nd June, 1886*) :—

65. For a railway from a point at or near Moncton, to Buctouche, in the province of New Brunswick, thirty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 96,000

66. For a railway from Ingersoll via London to Chatham, in the province of Ontario, eighty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 256,000

67. To the Northern and Western Railway Company, for ten miles of their railway, intervening between the termini of the portions of their railway for which subsidies are already granted, the one from Fredericton and the other from Indiantown, and an extension of two miles down to deep water at Chatham, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 32,000

68. To the Caraquet Railway Company, for ten miles of their railway, from the end of the present subsidized portion at Lower Caraquet to Shippegan, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

69. To the Lake Erie, Essex and Detroit River Railway Company, for thirty-seven miles of their railway, from Windsor to Leamington, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 118,400

70. To the Thunder Bay Colonization Railway Company, for fifty-six miles of their railway, from the end of the present subsidized section to a point near Crooked Lake, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 179,200

71. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, on the line of the Northern Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000

72. For a railway from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, eighteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

73. For a railway from Hereford to the International Railway, in the township of Eaton, in the province of Quebec, thirty-four miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 108,800

74. For a railway from St. Félix to Lake Maskinongé, parish of St. Gabriel in the province of Quebec, ten miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

75. For a railway from Glenannan to Wingham, in the province of Ontario, five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

76. For a railway from a point at or near the McCann Station, on the Intercolonial Railway, to the Joggins, onCumberland Basin, in the province of Nova Scotia, twelve miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 38,400

77. For a railway from L'Assomption to L'Epiphanie, in the province of Quebec, three miles and a half, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 11,200

78. To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly towards Désert, in the province of Quebec, a subsidy of $5,161 per mile, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, not exceeding in the whole 361,270

79. For a railway from St. Andrew's to the Canadian Pacific Railway at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400

80. To the Canada Atlantic Railway Company, for twelve miles of their railway from Clark's Island to Valleyfield, and from Lacolle, in the province of Quebec, to the international boundary, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

81. For a railway from Truro to Newport, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 156,800

82. To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding $1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of $3,200 per mile)..... 186,295

83. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

84. For the construction of wharfs and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of..... 6,000

85. To the Gananoque, Perth and James Bay Railway Company, seventeen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400

86. For a railway from St. Eustache to St. Placide, county of Two Mountains, eighteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

87. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley, on the line which will afford facilities of communication with the Iron Mines, Spring Side, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

88. For a railway from Yamaska to the River St. Francis, in the province of Quebec, ten miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

89. For a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, in the province of New Brunswick, twenty-eight miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 89,600

90. For a railway from Fredericton to the village of Prince William, in the province of New Brunswick, twenty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

91. For a railway from a point on the Intercolonial Railway near Newcastle or via Douglastown to a point on the River Miramichi, opposite the town of Chatham, in the province of New Brunswick, six miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $19,200

92. For a railway from a point on the Canadian Pacific Railway to Eganville, in the province of Ontario, twenty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

93. To the Belleville and North Hastings Railway Company, for seven miles of their railway, from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, in the province of Ontario, a subsidy (in addition to the subsidy of $1,500 per mile granted by 48-49 Victoria, chapter 59), not exceeding $1,700 per mile, nor exceeding in the whole..... 11,900

94. To the Napanee, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of..... 70,000

95. To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of..... 15,000

"The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose shall be granted to such companies respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies have been granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall be so constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company to the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements, and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By section 2 of this Act authority was given for the grant of a charter by the Governor in Council for the purpose of constructing a railway from Long Sault to the foot of Lake Temiscamingue.

By the Act 50-51 Vic., cap. 24, 1887 *(Assented to 23rd June, 1887).*

96. To the St. Catharines and Niagara Railway Company, for twelve miles of their railway from the city of St. Catharines to the bridge over the Niagara River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 38,400

97. To the Vaudreuil and Prescott Railway Company, for thirty miles of their railway from Vaudreuil towards Hawkesbury, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

98. To the Richmond Hill Junction Railway Company, for five miles of their railway from Richmond Hill Junction, on the Northern Railway of Canada, to Richmond Hill village, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

99. To the Drummond County Railway Company, for thirty miles of their railway from Drummondville towards Nicolet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

100. To the Joggins Railway Company, for one and a quarter miles of their railway extending from the southern end of the portion subsidized by the Act 49 Victoria, chapter 10, to the wharfs, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 4,000

101. To the Moncton and Buctouche Railway Company, for two miles of their railway from the west end of the portion subsidized by the Act 49 Victoria, chapter 10, to Moncton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 6,400

102. To the Beauharnois Junction Railway Company, for thirty miles of their railway from St. Martin's towards St. Anicet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

103. To the Harvey Branch Railway Company, for three miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600

104. To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

105. To the Guelph Junction Railway Company, for sixteen miles of their railway from its junction with the Canadian Pacific Railway to the town of Guelph, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200

106. To the Massawippi Railway Company, for ten miles of their railway from a point on the Atlantic and North-western Railway near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

107. To the Napanee, Tamworth and Quebec Railway Company, for four miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to Tweed, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 12,800

108. To the Dominion Lime Company, for seven miles of their railway from a point on the Quebec Central Railway, in the township of Dudswell, to the Dudswell Lime Company's quarries, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400

109. To the South Norfolk Railway Company, for seventeen miles of their railway from Port Rowan to the town of Simcoe, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400

110. To the Jacques Cartier Union Railway Company, extending and completing their railway, a subsidy of..... 20,000

111. For a line of railway from Mount Forest to Walkerton, twenty-four miles in length, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 76,800

112. To the Oshawa Railway and Navigation Company, for seven miles of their railway from Port Oshawa towards Raglan, a subsidy not exceeding $3,200 per mile. nor exceeding in the whole..... 22,400

113. To the Saguenay and Lake St. John Railway Company, for thirty miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

114. To the Great Eastern Railway Company, for thirty miles of their railway from the River St. Francis to the Arthabaska Railway, at St. Grégoire station, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $96,000

115. To the Ontario and Pacific Railway Company, for six miles of their railway from the northern end of the portion subsidized by the Act 47 Victoria, chapter 8, to the town of Perth, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200

116. To the Caraquet Railway Company, for seven miles of their railway from Lower Caraquet to Shippegan, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding in the whole .. 32,000

117. To the St. Lawrence and Lower Laurentian and Saguenay Railway Company, for the section of this railway from Grand Piles, on the St. Maurice River, to its junction with the Quebec and Lake St. John Railway, in lieu of the subsidy granted by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, for a line of railway from Grand Piles, on the St. Maurice River, to its junction with the Lake St. John Railway, a distance of about fifty miles, a subsidy of 217,600

118. To the St. John Valley and River du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 70,400

119. To the Lake Temiscamingue Railway Company, for four short sections of railway, in all about two miles in length, to overcome the rapids of the Ottawa River, known as "La Mi-Charge," "La Cave," "Les "Erables," and "La Montagne," and for the construction of wharfs and landing stages at these rapids, to connect the Canadian Pacific Railway at Mattawa with Lake Temiscamingue by steamboats, railways and other works (in lieu of a portion two miles in length, out of the eight miles of railway subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, under which about six miles of railway have already been built from the foot of Long Sault proper to the foot of Lake Temiscamingue, and in lieu also of the subsidy granted by the Act 49 Victoria, chapter 10), a subsidy of 12,400

120. To the Carillon and Grenville Railway Company, for twelve miles of their railway from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

121. To the Minudie Branch Railway Company, for five and a half miles of their railway from its junction with the Joggins Railway, near the River Hébert railway bridge, to the village of Minudie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 17,600

122. To the Lake Temiscamingue Colonization and Railway Company, for ten and a half miles of their railway from the Long Sault to Lake Kippewa, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 33,600

123. To the Leamington and St. Clair Railway Company, for two miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to the village of Comber, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 6,400

124. To the Cumberland Railway and Coal Company for fourteen miles of their railway from a point on the Spring Hill and Parrsboro' Railway, near Spring Hill, to a point on the railway between Oxford and New Glasgow, near Oxford village, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 44,800

125. To the Montreal and Champlain Junction Railway Company, a subsidy of..... $ 64,000

126. To the Quebec and Lake St. John Railway Company, for nine miles of their railway, the distance which the previous subsidies granted are short of covering from the city of Quebec to Lake St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 28,800

127. To the Temiscouata Railway Company, for thirty miles of a branch of their railway from Edmundston towards the St. Francis River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 96,000

128. To the Cornwallis Valley Railway Company, for thirteen miles of their railway from Kentville to Kingsport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 41,600

129. To the Nova Scotia Central Railway Company, for thirty-four miles of their railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

130. To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, a subsidy of..... 89,600

131. For a railway from Woodstock towards Centreville, twenty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 64,000

132. For a railway bridge over the St. Lawrence River, at Coteau Landing on the line of the Canada Atlantic Railway, a subsidy of fifteen per cent on the value of the structure, not to exceed..... 180,000

133. To the Lake Erie, Essex and Detroit River Railway Company, for twenty-seven miles of their railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding..... 118,400

"For the purpose of granting corporate powers to persons or companies undertaking the construction of railways or parts of railways, mentioned in the next preceding section, for the construction of which no corporate powers exist at the time of the passing of this Act, the Governor in Council may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, as the Governor in Council shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; the other subsidies, including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct their railway, shall be granted to such companies as shall be approved by the Governor in Council, as having established, to his satisfaction, their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized, except as regards the subsidy for the bridge over the

St Lawrence River, upon which shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"Notwithstanding anything contained in the Act forty-fifth Victoria, chapter fourteen, or in the Act forty-sixth Victoria, chapter twenty-five, the balances of the sums granted for a railway from St. Raymond to Lake St. John and to the Quebec and Lake St. John Railway Company by the said Acts respectively, which have not yet been paid by the Government, may be paid at any time within one year from the passing of this Act, subject to the conditions in the said Act contained."

By the Act 51 Vic., cap. 3, 1888 (*Assented to 22nd May, 1888*):—

134. To the Ottawa and Parry Sound Railway Company, for 22 miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by 49 Victoria, chapter 10, for a railway from a point on the Canadian Pacific Railway to Eganville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 70,400 00

135. To the Nova Scotia Central Railway Company, for 46 miles of their railway, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 147,200 00

136. To the Montreal and Champlain Junction Railway Company, for 3 miles of their railway from the end of the present subsidized section, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600 00

137. To the Massawippi Junction Railway Company, for their railway from a point on the Atlantic and North-west Railway, near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of..... 32,000 00

138. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of $31,500, to be paid out monthly as the work progresses, upon the certificate of the Chief Engineer of Government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken, and for three miles of their railway extending from a point three miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $9,600, provided that the entire work subsidized upon this railway shall be completed within four years from the passing of this Act, the subsidy granted by this Act not to exceed in the whole..... 41,100 00

139. To the Port Arthur, Duluth and Western Railway Company, for 84¾ miles of their railway from Port Arthur towards Gun Flint Lake, in lieu of the subsidies granted by 48-49 Victoria, chapter 59, and 49 Victoria, chapter 10, for the construction of a railway from Murillo Station to Crooked Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 271,200 00

140. To the Quebec and Lake St. John Railway Company, for 30 miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, being a transfer made at the request of the Saguenay and Lake St. John Railway Company of the subsidy granted to them by 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000 00

141. To the Temiscouata Railway Company, for 20 miles of their branch railway from Edmundston towards the St. Francis River, in the province of Quebec, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of..... $100,000 00

142. To the Quebec Central Railway Company, for the construction and completion of a line of railway from St. Francis Station to a point on the Atlantic and North-west Railway near Moose River, 90 miles, in lieu of the balance of the subsidy, unearned, granted by 47 Victoria, chapter 8, a subsidy not exceeding $21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of 288,000 00

143. To the Central Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 4,052 tons of used iron rails and fastenings, loaned to the St. Martin's and Upham Railway Company, now forming part of the Central Railway, which rails and fastenings stand in the Public Ac ounts as an asset for..... ..... 83,612 54

144. To the Elgin, Petitcodiac and Havelock Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,201 tons of used iron rails and fastenings loaned to the Elgin Branch Railway, now forming part of the Elgin, Petitcodiac and Havelock Railway, which rails and fastenings stand in the Public Accounts as an asset for 44,252 82

145. To the Kent Northern Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,549 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... ..... 58,334 27

146. To the Halifax Cotton Company of Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 233 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 4,335 00

147. To the Steel Company of Canada, in Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company of 597 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 11,964 66

148. To the Albert Railway Company of New Brunswick, a grant as a subsidy (the section of road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 726 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 14,665 45

149. To the Chatham Branch Railway of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 958 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... $24,439 84

"All the lines, for the construction of which subsidies are granted, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and also the said subsidies respectively, payable in cash, shall be payable out of the Consolidated Revenue Fund of Canada by instalments, on the completion to the satisfaction of the Minister of Railways and Canals of each section of the railway of not less than 10 miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized."

By the Act 52 Vic., chap. 3, 1889. *(Assented to 2nd May, 1889)*:—

150. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Ottawa, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $172,400 00

151. To the Ottawa and Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of sixty-two miles, a subsidy not exceeding in the whole..... 320,000 00

152. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway, from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

153. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the line of the Northern and Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000 00

154. For a railway from St. Andrew's to the Canadian Pacific Railway, at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

155. For a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 156,800 00

156. For a line of the Central Railway from the head of Grand Lake to the Intercolonial Railway, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000 00

157. To the Albert Southern Railway Company, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole..... 31,771 43

158. To the Baie des Chaleurs Railway Company, the balance remaining unpaid of the subsidy mentioned in the Act 49th Victoria, chapter 17, not exceeding in the whole..... 244,500 00

159. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria Branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole $145,000 00

160. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Act 45th Victoria, chapter 14, and 46th Victoria, chapter 25, not exceeding in the whole.. 35,000 00

161. For a railway from some point on the Joggins Railway, near the Hébert River, to Young's Mills, in the province of Nova Scotia, a distance of five miles, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 16,000 00

162. To the St. Clair Frontier Tunnel Company, for the construction of a tunnel under the St. Clair River, from a point at or near Sarnia, to a point at or near Port Huron, a subsidy not exceeding in the whole 375,000 00

163. To the Pontiac and Renfrew Railway Company, for six miles of their railway from the north bank of the Ottawa River, opposite Braeside, or from Bristol Iron Mines, to the Pontiac Pacific Junction Railway, near the Quyon River, in the province of Quebec, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 19,200 00

164. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the St. Charles River, to or near to Cap Tourmente, in the province of Quebec, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 96,000 00

165. To the Fredericton and St. Mary's Bridge Company, for a bridge over the St. John River, at Fredericton, in the province of New Brunswick, a subsidy not exceeding in the whole..... 30,000 00

166. To the Napanee, Tamworth and Quebec Railway Company, for seven miles of their railway, from a point at or near Yarker to a point at or near Harrowsmith, and to a company for three miles of railway from a point at or near Harrowsmith to a point at or near Sydenham, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 32,000 00

167. For a railway from a point near Sicamous, on the Canadian Pacific Railway, to a point on Lake Okanagan for fifty-one miles of such railway, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 163,200 00

168. To the Cornwallis Valley Railway Company, for one mile of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Kingsport, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 3,200 00

169. To the Lake Témiscamingue Colonization and Railway Company, for fifteen miles of their railway, from Mattawa station on the Canadian Pacific Railway, towards the Long Sault, or from the Long Sault towards the said Mattawa station, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

170. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of Saint-Michel des Saints, on the River Mattawin, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

171. To the Kingston, Smith's Falls and Ottawa Railway Company, for twenty miles of their railway, from the city of Kingston towards Smith's Falls, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 64,000 00

172. To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway, from Woodstock to Hamilton, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 158,400 00

173. For a railway from St. Césaire to St. Paul d'Abbotsford, in the province of Quebec, five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000 00

174. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

175. To the Drummond County Railway Company, for four and one-half miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Ball's Wharf, on the St. Lawrence River, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 14,400 00

176. To the St. Catharines and Niagara Central Railway Company, for twenty miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Catharines, towards the city of Hamilton, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

177. To the Quebec and Lake St. John Railway Company, for twenty miles of their railway, from the end of the section of thirty miles from Lake St. John towards Chicoutimi, subsidized by the Act 51 Victoria, chapter 3, towards Chicoutimi, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

178. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

179. To the Hereford Railway Company, for fifteen miles of their railway, from Cookshire to a junction with the Quebec Central Railway at Dudswell, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

180. To the Massawippi Junction Railway Company, for fifteen miles of their railway, from Ayer's Flat to Coaticook, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

181. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro', towards Palmer's Rapids, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 64,000 00

182. To the Thousand Islands Railway Company, for four miles of their railway, from a point near the St. Lawrence River, in Gananoque village, to Gananoque Junction of the Grand Trunk Railway, and for thirteen miles of their railway, from Gananoque Junction of the Grand Trunk Railway to a junction with the Brockville, Westport and Sault Ste. Marie Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400 00

183. For a railway from Cape Tourmente towards Murray Bay, twenty miles, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $64,000 00

184. To the Amherstburg, Lake Shore and Blenheim Railway Company, for twenty miles of their railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000 00

" So much of the subsidy of three thousand two hundred dollars per mile, which under the provisions of the Act forty-ninth Victoria, chapter seventeen, and of this Act, may be paid to the Baie des Chaleurs Railway Company in respect of the thirty miles of their railway, from the seventieth to the hundredth mile, eastward from Metapediac, shall be applicable to the section of the said railway, comprised between the fortieth and the seventieth mile thereof, eastward from Metapediac, instead of to the said first mentioned section of thirty miles, making six thousand four hundred dollars per mile applicable to the secondly mentioned section of thirty miles; but the foregoing provision shall be subject to the condition that the said company undertake to complete the thirty miles of their railway from the seventieth to the hundredth mile eastward from Metapediac within a reasonable time, not to exceed four years, to be fixed by Order in Council, and without any further subsidy from the Government of Canada, and that they deposit with the Minister of Railways and Canals, as security to the Crown that they will well and truly carry out their undertaking, their bonds to the amount of two hundred thousand dollars.

" The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized, except as respects the tunnel under the St. Clair River, in which case there shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

" The granting of such subsidies, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

" And for the removal of doubts it is hereby declared and enacted that the provision in the Act passed in the fifty-first year of Her Majesty's reign, and chaptered three, relating to the Pontiac Pacific Junction Railway Company, extended and extends the several subsidies in aid of the said company for four years from the passing of the said Act, that is to say, from the twenty-second day of May, one thousand eight hundred and eighty-eight."

By the Special Act, 52 Vic., cap. 5, 1889 *(Assented to 2nd May, 1889)*:—

185. In order to enable the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company to complete their railway from Regina to some point on the South Saskatchewan River at or near Saskatoon, and thence northward to Prince Albert, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails,

for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum in manner following, that is to say:—the sum of fifty thousand dollars to be paid annually on the construction of the railway to a point at or near Saskatoon, such payment to be computed from the date of the completion of the railway to such point; and the remaining thirty thousand dollars annually on the extension of the railway to Prince Albert, such payment to be computed from the date of such last mentioned completion: Provided that if the second portion of the said railway is not built and operated to Prince Albert within two years after the completion of the railway to the South Saskatchewan as aforesaid, the payment of fifty thousand dollars shall cease until the whole railway is finished to Prince Albert.

By the Act 53 Vic., cap. 2, 1890 *(Assented to 16th May, 1890)*:—

186. To the Montreal and Ottawa Railway Company, for thirty miles of their railway, from the western end of the thirty-six miles subsidized by the Act 50-51 Victoria, chapter 24, towards Ottawa, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole ..... $ 96,000

187. To the Waterloo Junction Railway Company, for eleven miles of their railway, from Waterloo to Elmira, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 35,200

188. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Acts 45 Victoria, chapter 14, and 46 Victoria, chapter 25, not exceeding in the whole ... 600

189. For a railway from Woodstock via London to Chatham, in the province of Ontario, thirty miles in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Ingersoll via London to Chatham, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 256,000

190. To the St. Catharines and Niagara Railway Company, for fourteen miles of their railway, from the end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Hamilton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 44,800

191. To a railway from Ottawa to Morrisburg, fifty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 166,400

192. To the Erie and Huron Railway Company, for twenty-two miles of their railway from Petrolea via Oil Springs to Dresden, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 70,400

193. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a railway from Brockville to Westport, the balance remaining unpaid of the subsidy granted by the Act 48-49 Victoria, chapter 59, not exceeding in the whole 83,000

194. To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

195. To the Port Arthur, Duluth and Western Railway Company, for five miles of their railway, being a branch of the main line of railway to the Kakabeka Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 16,000

196. To the Lake Erie and Detroit River Railway Company, for fifty miles of their railway, on a line to be fixed by the Governor in Council, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 160,000

197. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway, from Bobcaygeon to the Midland Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 51,200

198. To the Kingston, Smith's Falls and Ottawa Railway Company, for thirty-six miles of their Railway, from the north-east end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Smith's Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 115,200

199. To the Ottawa and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

200. To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway, from Belleville to Tweed and thence to Bridgewater, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

201. To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

202. To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 11,200

203. To the Woodstock and Centreville Railway Company, for six miles of their railway, from the western end of the twenty miles subsidized by the Act 50-51 Vic., chap. 24, to the International boundary between the province of New Brunswick and the state of Maine, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200

204. For a railway from a point at or near Fredericton, via Oromocto and Gagetown, to a point on the New Brunswick Railway west of Westfield station, for thirty miles thereof, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

205. To the Central Railway Company of New Brunswick, for four and a half miles of their railway, the distance which the previous subsidy granted is short of covering, from the head of Grand Lake to the Intercolonial Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 14,400

206. To the Montreal and Western Railway Company, for seventy miles of their railway, from St. Jérôme, north-westerly towards Désert, in the province of Quebec, in lieu of the subsidy granted by the Act 49 Vic., chap. 10, a subsidy not exceeding $5,161 per mile, nor exceeding in the whole 361,270

"Provided, that the subsidy hereby granted to the Montreal and Western Company may be paid by instalments on the completion of each section of the railway as follows, that is to say :—

SECTIONS.	Approximate length in miles.
St. Jérôme to Shawbridge	8
Shawbridge to St. Sauveur	4
St. Sauveur to Ste. Adèle	6
Ste. Adèle to Lac à la Fourche	6
Lac à la Fourche to Ste. Agathe	6½
Ste. Agathe to St. Faustin	14
St. Faustin to St. Jovite	7½
St. Jovite to Summit Lake	8
Summit Lake to La Chute aux Iroquois	7
La Chute aux Iroquois towards Désert	3

"Such instalments to be proportionate to the value of the portions so completed in comparison with that of the whole work undertaken, to be established as aforesaid."

207. For seventy-five miles of the railway from Shelburne, in the county of Shelburne, and from Liverpool, in the county of Queen's towards Annapolis, in the province of Nova Scotia, to be so contracted for as to secure the construction to both Shelburne and Liverpool, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 240,000

208. To the Inverness and Richmond Railway Company, for fifty miles of their railway from Port Hawkesbury to Broadcove, a subsidy not exceeding $1,000 per mile, nor exceeding in the whole..... 50,000

209. To the International Railway Company, for a railway from Sherbrooke to the international boundary, the balance remaining unpaid of the subsidy granted by the Act 46 Vic., chapter 25, not exceeding in the whole 3,840

210. For completing the Montreal and Sorel Railway from St. Lambert to Sorel 40,000

211. To the Pontiac Pacific Junction Railway Company, for seven and a half miles of their railway, from Hull to Aylmer, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 24,000

212. To the Montreal and Lake Maskinongé Railway Company, for three and a half miles of their railway, the distance which the subsidy granted by the Act 49 Vic., chapter 10, is short of covering from St. Félix to Lake Maskinongé, in the parish of St. Gabriel, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 10,200

213. To the Great Eastern Railway Company, for a bridge over the Nicolet River, and also a bridge on the St. Francis River, a subsidy of 15 per cent on the value of the structure, not to exceed 37,500

214. To the Drummond County Railway Company, for twenty-four miles of their railway, from Drummondville to Ste. Rosalie, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 76,800

215. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

216. To the Lake Temiscamingue Colonization Railway Company, for twenty miles of their railway, from the northern end of the fifteen miles subsidized by the Act 52 Vic., chapter 3, to the Long Sault, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000

217. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from the northern end of the 15 miles subsidized by the Act 52 Victoria, chapter 3, towards the parish of St. Michel des Saints, on the River Mattawa, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000

218. To the St. Lawrence and Adirondack Railway Company, for eighteen miles of their railway, from Valleyfield to Huntingdon, on the Montreal and Champlain Junction Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

219. To the Quebec Central Railway Company, for ninety miles of their railway, from St. Francis Station, on the Quebec Central Railway, to a point on the Atlantic and North-western Railway,

near Moose River, or from a point on the Quebec Central Railway between the Chaudière River and Tring Station, to a point on the International Railway at or near Lake Megantic, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding $21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period, as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of $288,000

220. To the Quebec and Lake St. John Railway Company, for a railway bridge over the St. Charles River, to give access to the city of Quebec, a subsidy not to exceed in the whole $30,000; also for twelve miles of their railway from Lorette via Charlesbourg to Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $38,400..... 68,400

221. For a railway from Summerside to Richmond Bay, in the province of Prince Edward Island, three miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600

222. To the Columbia and Kootenay Railway Company, for thirty-five miles of their railway, from the outlet of Kootenay Lake to a point on the Columbia River as near as practicable to the junction of the Kootenay and Columbia Rivers, a subsidy not exceeding $3,200 per mile, nor to exceed in the whole..... 112,000

223. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley on a line which will afford facilities of communication with the Iron Mines, Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

224. For a railway from Fredericton to the village of Prince William in the province of New Brunswick, twenty-two miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

225. To the St. John Valley and Rivière du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

226. To the Témiscouata Railway Company, for sixteen miles of their railway, from the west end of the twenty miles of their branch railway from Edmundston, subsidized by the Act 51 Victoria, chapter 3, towards the St. Francis River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200

227. For a railway from the north end of the fourteen miles for which a subsidy was granted by the Act 50 and 51 Victoria, chapter 24, to the Tobique Valley Railway Company, from Perth Centre towards Plaister Rock Island, eleven miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 35,200

228. To the Orford Mountain Railway Company, for thirty one miles of their railway, between Eastman and Kingsbury, a subsidy not exceeding $3,200 per mile, nor exceedingin the whole 99,200

229. For a railway from Lachine Bank, on a line of the Grand Trunk Railway, to a point at or near Rivière des Prairies, a distance of fifteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; the other subsidies,

including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct its railway, shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council,—except the Erie and Huron Railway, which shall be completed within two years from the first day of July next. And they shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specifying an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make. The location, also, of every such line of railway shall be subject to the approval of the Governor in Council. And all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as regards the Erie and Huron Railway Company, upon which payment shall be made only upon the completion of the work—except, also as regards the subsidies to the Inverness and Richmond Railway, which shall be paid on the completion of each ten mile section, in accordance, as nearly as practicable, with the agreement between the company and the municipality of Inverness, and with section four of the Act of the Legislature of Nova Scotia, 1890, intituled: An Act to enable the county of Inverness to borrow money—except, also, as regards the subsidies to the Great Eastern Railway Company for bridges over the Nicolet and St. Francis Rivers, and to the Quebec and Lake St. John Railway for the bridge over the St. Charles River, upon which shall be paid fifteen per cent of the value of work done, on monthly progress estimates certified by the Chief Engineer and upon the approval of the Minister of Railways and Canals—and except also the subsidy granted to the Quebec Central Railway Company, the first annual payment upon which shall be made at the end of twelve months from the date of the Chief Engineer's certificate of the completion of the work, and each subsequent payment at the end of each twelve months thereafter, for the term of twenty years.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing running powers or traffic arrangements or other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those subsidized, as the Governor in Council determines."

By the special Act 53 Vic., ch. 5, 1890 *(Assented to 16th May, 1890)*:—

230. In order to enable the Calgary and Edmonton Railway Company to construct so much of their railway as reaches from a point on the line of the Canadian Pacific Railway Company within the town of Calgary to a point on the North Saskatchewan River near Edmonton, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum, in manner following, that is to say: the sum of eighty thousand dollars to be paid annually on the construction of the railway from Calgary to a point on the North Saskatchewan River near Edmonton,—such payment to be computed from the date of the completion of the railway between such points: Provided that the Governor General in Council may order such sums to be paid in semi-annual instalments, and may permit the company to assign the same by way of security for any bonds or securities which may be issued by the company in respect of the company's undertaking.

By 54-55 Victoria, ch. 8, 1891 *(Assented to 30th Sept., 1891)*:—

231. To the Great Northern Railway Company, for a railway from a point at or near New Glasgow or St. Lin to or near to Montcalm, in the province of Quebec, eighteen miles, the balance

remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Act forty-ninth Victoria, chapter ten, nor exceeding in the whole ..... $ 28,100 00

232. To the Quebec and Lake St. John Railway Company, for the railway bridge over the St. Charles River to give access to the city of Quebec, the difference between the amount already paid to the company and the sum of $30,000 mentioned as not to be exceeded by the Act fifty-third Victoria, chapter two, a subsidy not exceeding 5,250 00

233. To the Oshawa Railway Company, for seven miles of their railway from Port Oshawa towards Raglan, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400 00

234. To the St. Lawrence, Lower Laurentian and Saguenay Railway Company, for the section of their railway from Grand Piles, on the St. Maurice River to its junction with the Quebec and Lake St. John Railway, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole 92,784 00

235. To the Great Eastern Railway Company, for thirty-miles of their railway, from the River St. Francis to the Arthabaska Railway at St. Grégoire station, the balance remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole 79,700 00

236. To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway from Woodstock to Hamilton, in the province of Ontario, in lieu of the subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 158,400 00

237. To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole 46,040 00

238. To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding $6,400 per mile, nor exceeding in the whole 89,600 00

239. To the Kingston, Smith's Falls and Ottawa Railway Company for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed $179,200, granted by the Acts fifty-second Victoria, chapter three, and fifty-third Victoria, chapter two, a subsidy not exceeding $12,534 per annum, to be paid in semi-annual instalments of $6,267 each, for twenty years, which represents a grant in cash of 179,200 00

"Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles; Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding $1,170,000, in consideration whereof there shall be paid to the company, for twenty years, a semi-annual annuity calculated on a basis of three and one-half per cent on the amount so deposited; Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

240. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro' towards Palmer's Rapids, in the province of Ontario, in lieu of a subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $64,000 00

"Provided that the subsidy hereby granted to the Brockville, Westport and Sault Ste. Marie Railway Company may be paid by instalments, on the completion of each section of the railway as follows, that is to say:—

Sections.	Length in miles.
From, at or near Newboro' to Westport	4
From Westport towards Palmers Rapids	16

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also of every such line of railway, shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, the first semi-annual payment upon which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of twenty-eight miles of the railway, and each subsequent payment at the end of each six months thereafter, for the term of twenty years,—except also as to the Quebec and Lake St. John Railway Company, the subsidy to which shall be paid upon the completion of the work,—except also as to the Brockville, Westport and Sault Ste. Marie Railway Company, the subsidy to which shall be paid as follows: on the completion of that portion of the said road from, at or near Newboro' to Westport, a distance of four miles, the sum of twelve thousand eight hundred dollars, and on the completion of the remaining sixteen miles from Westport towards Palmer's Rapids, the sum of fifty-one thousand two hundred dollars.

"Within one month after the commencement of each session of Parliament, whilst any of the said moneys are being paid out, there shall be laid before Parliament a statement showing all payments of such moneys during the then next preceding year, the names of the respective persons to whom such payments have been made, and the amounts paid them respectively, together with the engineer's report upon which pay-

ments have been recommended, and copies of all contracts between the Government and the company under which the said subsidies are authorized to be paid.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running power or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

By the Act 55-56 Victoria, chap. 5, 1892 *(Assented to 9th July, 1892)* :—

241.	To the Lake Erie and Detroit River Railway Company, for fifty-eight miles of their railway from a point at or near Cedar Creek to the town of Ridgetown, in lieu of the subsidies granted to the Lake Erie and Detroit River Railway Company by the Act 53 Victoria, chapter 2, and to the Amherstburg, Lake Shore and Blenheim Railway Company by the Act 52 Victoria, ch. 3.	$224,000 00
242.	To the Ottawa, Arnprior and Parry Sound Railway Company, for fifty-five miles of their railway from Barry's Bay towards the Northern Pacific Junction Railway, a subsidy not exceeding $6,400 per mile on the first twenty-seven and a half miles out from Barry's Bay, and not exceeding $3,200 per mile on the second twenty-seven and a half miles, nor exceeding in the whole	264,000 00
243.	To the Canadian Pacific Railway Company or to the Columbia and Kootenay Railway and Navigation Company, for a railway from a point on the Canadian Pacific Railway at or near Revelstoke to the head of Arrow Lake, for twenty-five miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	80,000 00
244.	To the Tobique Valley Railway Company, for a railway from the north end of the eleven miles for which a subsidy was granted by the Act 53 Victoria, chapter 2, to Plaister Rock Island, for 3 miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	9,600 00
245.	To the Monfort Colonization Railway Company, for twenty-one miles of their railway from Lachute, St. Jérôme or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Monfort and westward, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	67,200 00
246.	To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway from the Belmont iron mines to the Canadian Pacific Railway and the Central Ontario Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	32,000 00
247.	To the Montreal and Champlain Junction Railway Company, the balance remaining unpaid of the subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, a subsidy of	15,100 00
248.	To the Buctouche and Moncton Railway Company, for thirty-two miles of their railway from Moncton to Buctouche, the balance remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Acts 49 Victoria, chapter 10, and 50-51 Victoria, chapter 24, not exceeding in the whole	35,480 00
249.	To the Cobourg, Northumberland and Pacific Railway Company, for nineteen miles of their railway from Cobourg to the Ontario and Quebec Railway (in addition to the subsidy granted by the Act 53 Victoria, chapter 2), a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	60,800 00

250. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien in the said county, for twelve miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 38,400 00

251. To the Inverness and Richmond Railway Company (or any other company undertaking the work), for twenty-five miles of their railway from a point on the Cape Breton Railway, at or near Orangedale, to Broadcove, a subsidy not exceeding $3,200 per mile, in lieu of the subsidy of $50,000 granted to the said railway company by 53 Victoria, chapter 2, and on the same conditions, not exceeding in the whole 80,000 00

252. To the Nicola Valley Railway Company, for twenty-five miles of their railway from a point on the Canadian Pacific Railway at or near Spence's Bridge towards Nicola Lake 80,000 00

253. To the Lotbinière and Megantic Railway Company, for fifteen miles of their railway from a point at or near St. Jean Deschaillons towards Glen Lloyd, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

254. To the Stewiacke and Lansdowne Railway Company, for a railway from a point on the Intercolonial Railway, through the Stewiacke Valley, on a line which will afford facilities of communication with the iron mines at Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 80,000 00

255. To the Philipsburg Junction Railway and Quarry Company, for six and seven-hundredths miles of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 21,600 00

256. To the Kingston, Napanee and Western Railway Company, for three miles of their railway from a point at or near Harrowsmith to a point at or near Sydenham, in lieu of the subsidy granted for this section of road by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 9,600 00

257. For a railway from Cape Tourmente towards Murray Bay, in the province of Quebec, twenty miles, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000 00

258. To the Stewiacke and Lansdowne Railway Company, for a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, for forty-nine miles of such railway, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 156,800 00

259. To the Restigouche and Victoria Railway Company, for fifteen miles of their railway from Campbelton towards Grand Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

260. For a railway from St. Johns to Ste. Rosalie, thirty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 102,400 00

261. For a railway from St. Placide to St. Andrew's, eight miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 25,600 00

262. For a railway to complete the connection between Sydney and Louisburg, in the county of Cape Breton, for twenty-eight miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 89,600 00

263. To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway from Belleville to Tweed and thence to Bridgewater, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 96,000 00

264. To the Kingston, Smith's Falls and Ottawa Railway Company, for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed $179,200, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of such subsidies so granted, to be paid in semi-annual instalments for such period not exceeding twenty-one years, as the company may elect, which represents a grant in cash of..... 179,200 00

" Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles : Provided also, that the company may deposit with the Minister of Finance and Receiver General, a sum not exceeding $1,170,000, in consideration whereof there shall be paid to the company for such period not exceeding twenty years as the company may elect, a semi-annual annuity calculated on a basis of three and a half per cent on the amount so deposited. Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

265. To the St. Catharines and Niagara Central Railway Company, for thirty-four miles of their railway from the city of St. Catharines to the city of Hamilton, in lieu of the subsidies, not to exceed $108,000, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of the said subsidies, to be paid in semi-annual instalments for such period, not exceeding twenty years, as the company may elect, representing a grant in cash of $108,000 : Provided that, upon the completion of ten miles of said railway, a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole thirty-four miles. Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding $400,000, in consideration whereof there shall be paid by the Government to the company, for such period not exceeding twenty years, as the company may elect, a semi-annual annuity, calculated on a basis of three and a half per cent on the amount so deposited, or a guarantee of a like sum, as interest on the bonds of the company : Provided further, that the company, with the approval of the Governor in Council, may assign the said subsidy and annuity to trustees by way of security for principal, or interest of any bonds or securities which may be issued by the company in respect of their undertaking, and the subsidy last above mentioned to the St. Catharines and Niagara Central Railway Company shall be paid in instalments, the first semi-annual payment upon which shall be made at the end of the six months from the date of the Chief Engineer's certificate of the completion of the first ten miles of railway, and each subsequent payment at the end of six months thereafter, for the term of twenty years or less. It is a condition of this subsidy that the sum not exceeding $400,000 above mentioned shall be deposited with the Finance Minister before January 1st, 1893.

266. To the Woodstock and Centreville Railway Company, for a railway from Woodstock towards Centreville, twenty miles, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $64,000 00

267. To the Brockville, Westport and Sault Ste. Marie Railway Company, for the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding $3,200 per mile, and also for the balance remaining unpaid of the subsidy granted by the Act 53 Victoria, chapter 2, nor exceeding in the whole..... 96,800 00

268. To the New Glasgow Iron, Coal and Railway Company, for a railway from Eureka Junction on the Intercolonial Railway to a point at or near Sunnybrae, including a branch line to the charcoal iron furnace at Bridgeville, for twelve and a half miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 40,000 00

269. To the Thousand Island Railway Company, for an extension of their railway to connect with the Brockville, Westport and Sault Ste. Marie Railway, the Kingston, Napanee and Western Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, and an extension across the mouth of the Gananoque River, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 44,000 00

Payable, $14,000 on the completion of the last named or southern extension, and the balance of said subsidy, being $30,000, on the completion of the first named or northern extension of their railway.

270. To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $96,000 00

271. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway from the end of the line subsidized by the Act 53 Victoria, chapter 2, at the junction with the Midland Railway, to Pontypool, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200 00

272. For seventy-five miles of the railway from Sand Point, Shelburne Harbour, in Nova Scotia, to Annapolis Royal, in the county of Annapolis and to a junction at or near New Germany on the Nova Scotia Central Railway, with a view to future construction to Liverpool, in lieu of the subsidy of a like amount granted by the Act 53 Victoria, chapter 2, for the same length of railway from Shelburne and from Liverpool, towards Annapolis, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 240,000 00

273. To the Kingston, Napanee and Western Railway Company, for twenty miles of their railway, being extensions or branches in the counties of Peterborough, Hastings, Addington, Frontenac or Leeds, towards iron deposits, a subsidy not exceeding $3,200 per mile, payable in instalments regulated by the length of each of the said extensions, additions or branches, the subsidy not exceeding in the whole..... 64,000 00

274. To the St. John Valley and Rivière du Loup Railway Company, for ten miles of their railway from the north end of the line subsidized by the Act 53 Victoria, chapter 2, towards the town of Woodstock, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

275. To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 96,000 00

276. To the Ottawa, Arnprior and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000 00

277. To the Ottawa, Arnprior and Parry Sound Railway Company, for twenty-two miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 70,400 00

278. To the Lake Témiscamingue Colonization Railway Company, for thirty-five miles of their railway from Mattawa to the Long Sault, in lieu of the subsidies granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 112,000 00

279. To the Témiscouata Railway Company, for twelve miles of their railway from the north end of the section of the St. François Branch subsidized by the Act 51 Victoria, chapter 3, being the first twelve miles on the section subsidized by the Act 53 Victoria, chapter 2, a subsidy not exceeding $1,800 per mile, in addition to the subsidy already granted, and not exceeding in the whole 21,600 00

280. To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway from Port Burwell to Tilsonburg, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200 00

281. To the Woodstock and Centreville Railway Company, for six miles of their railway from the west end of their twenty miles subsidized by the Act 50-51 Victoria, chapter 24, to the international boundary between the province of New Brunswick and the state of Maine, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 19,200 00

282. To the Lake Témiscamingue Colonization Railway Company, for 15 miles of their railway from the Long Sault to the crossing of the Kippewa River, a subsidy not exceeding $3,200 per mile—and a subsidy of fifteen per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not exceeding $15,000,—nor exceeding in the whole 63,000 00

283. To the Goderich and Wingham Railway Company, for thirty-one miles of their railway from Goderich to Wingham, via Port Albert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 99,200 00

284. To the Joliette and St. Jean de Matha Railway Company, for eight miles of their railway from St. Félix de Valois to St. Jean de Matha, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 25,600 00

285. To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 48,000 00

286. To the Nipissing and James Bay Railway Company, for twenty-five miles of their railway from, at or near North Bay station on

the Canadian Pacific Railway towards James Bay, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 80,000 00

287. For a railway from a point on the Intercolonial Railway between Ste. Flavie and Little Métis station to Matane, for fifty miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000 00

288. To the Ontario and Pacific Railway Company, for fifty-three and eighty-seven hundredths miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 172,400 00

289. For a railway from a point on the line of the Canadian Pacific Railway on the Isle Jésus, in the county of Laval, towards St. Eustache, for twelve miles of such railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, to the Carillon and Grenville Railway Company, for twelve miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

290. For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for eighteen miles of such railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600 00

291. To the Port Arthur, Duluth and Western Railway Company, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding, with the amount already paid, $3,200 per mile, nor exceeding in the whole..... 114,125 00

292. To the Drummond County Railway Company for four and six-tenths miles of their railway from Bull's Wharf, on the St. Lawrence River, near Nicolet, to Ste. Rosalie Junction, an excess of distance by the constructed line over the subsidies heretofore voted for a railway between the said points, $3,200 per mile, not exceeding in the whole..... 14,720 00

293. To the St. Lawrence and Adirondack Railway Company, for five and forty-two hundredths miles of their railway, from Huntingdon towards the international boundary, which, with the distance between Valleyfield and Huntingdon, twelve and fifty-eight hundredths miles, makes up the distance of eighteen miles named in the 53 Vic., chap. 2, granting a subsidy to this company, and for five and forty-hundredths miles from the east end of the eighteen miles referred to to the international boundary, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 25,024 00

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated

Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, and the subsidy granted to the St. Catharines and Niagara Central Railway Company, the first semi-annual payments upon both of which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of their railways respectively, and each subsequent payment at the end of each six months thereafter, for the term of twenty years or less.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines."

294. Notwithstanding the expiration of the time limited by the Act 47 Victoria, chapter 8, and by the contract entered into with the Pontiac Pacific Junction Railway Company, the Governor in council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act.

295. Notwithstanding the expiration of the time limited by the Act 52 Victoria, chapter 3, and by the contract entered into with the Quebec and Lake St. John Railway Company, the Governor in Council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act; and notwithstanding anything contained in the Act 50-51 Victoria, chapter 24, the Governor in Council may also pay to the said company the balance remaining unpaid of the subsidy granted to the company by the said Act, amounting to $12,800, on the four miles of their road from the north end of the main line subsidized towards Roberval.

By the Act 56 Vic., chap. 2, 1893 (*Assented to 1st April, 1893*):—

296. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 64,000 00

297. To the United Counties Railway Company, for thirty-two miles of their railway, from a point at or near the town of Iberville to St. Hyacinthe, and thence towards Sorel, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, for a railway from St. Johns to Ste. Rosalie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 102,400 00

298. To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway, divided into two sections: first, from the Belmont Iron Mines to Marmora village; second, from Marmora village to the junction with the Ontario Central Railway, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000 00

299. To the Central Ontario Railway Company, for twenty miles of their railway, from Coe Hill or Gilmore, or some point between

Coe Hill and Gilmore, to Bancroft, via L'Amable, or as near thereto as practicable, in lieu of the subsidy granted by the Act 48-49 Victoria, chapter 59, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 64,000 00

300. To the Quebec and Lake St. John Railway Company, for thirty miles of their railway, from Lake St. John towards Chicoutimi, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding in the whole..... 81,040 00

301. To the Irondale, Bancroft and Ottawa Railway Company, for fifty miles of their railway, from the Victoria branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47 Victoria, chapter 8, and again granted by the Act 52 Victoria, chapter 3, not exceeding in the whole 145,000 00

302. To the Beauharnois Junction Railway Company, for thirty miles of their railway, from Ste. Martine towards St. Anicet, the balance remaining unpaid of the subsidy granted by the Act 50-51 Victoria, chapter 24, not exceeding in the whole..... 3,500 00

303. To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 11,200 00

304. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the River St. Charles, to or near to Cape Tourmente, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.. 30,400 00

305. To the Ottawa and Gatineau Valley Railway Company, for sixty-two miles of their railway, from Hull station towards Le Désert, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 89,248 00

306. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara, or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

307. To the Nova Scotia Central Railway Company (or to such person or persons or company as in the opinion of the Minister or acting Minister of Justice are entitled to the same) for eighty miles of their railway, from Lunenburg, on the east coast of Nova Scotia, westward to a point in the district of New Germany, together with a spur about three-fourths mile long to Bridgewater railway wharf, and from a point thirty-three and a half miles from Lunenburg and running to Middleton on the Windsor and Annapolis Railway, of unpaid subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, an amount not exceeding in the whole..... 4,500 00

308. To the Great Northern Railway Company, for eighteen miles of their railway, from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 54-55 Victoria, chapter 8, not exceeding in the whole..... 25,600 00

309. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific

Railway between Joliette and St. Félix de Valois, in lieu of the subsidy granted by the Act 53 Victoria, chap. 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000 00

310. To the Montfort Colonization Railway Company, for twenty-one miles of their three-feet gauge railway from Lachute, St. Jérôme, or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Montfort and westward, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 67,200 00

311. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of St. Michel des Saints, on the river Mattawa, in the province of Quebec, and for fifteen miles of their railway from the north end of the fifteen miles above referred to, towards the parish of St. Michel des Saints on the river Mattawa, in the province of Quebec, in lieu of the subsidies granted by the Acts 52 Victoria, chap. 3, and 53 Victoria, chap. 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

312. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the Northern Pacific Junction Railway, in the province of Ontario, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 97,600 00

313. To the Jacques Cartier Union Railway Company, for extending and completing their railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy of..... 20,000 00

314 To the Oshawa Railway Company, for seven miles of their railway and branches as follows: from Port Oshawa to a point at or near Edmondson's Falls mill site, near Mill Street, in the town of Oshawa (this portion being known as the "Lake" section of the said railway); thence to a point at or near the town hall in the town of Oshawa, and thence to the Oshawa station of the Grand Trunk Railway Company of Canada (this portion being known as the "Town" or "Northern" section of the said railway)—in lieu of the subsidy granted by the Act 54-55 Victoria, chapter 8, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

"All the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make: the location, also, of every such line of railway shall be subject to the approval of the Governor in Council.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"All the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed

in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as follows :—

"(*a.*) The subsidy to the Ontario, Belmont and Ottawa Railway Company, which shall be paid as follows : on the completion of the first section, an instalment proportionate to the value of the said section in comparison with that of the ten miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy on the completion of the second section ;

"(*b.*) The subsidy to the Oshawa Railway Company, which shall be paid as follows : on the completion of the "Town" or "Northern" section, an instalment proportionate to the value of the said section in comparison with that of the seven miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy, on the completion of the "Lake" section of the said railway."

By the Act 57-58 Vic., cap. 4, 1894. *(Assented to, 23rd July, 1894)* :—

315. To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000

316. To the Brockville, Westport and Sault Ste. Marie Railway, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding $3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was re-granted by chapter 5 of 1892 ; the whole not exceeding 86,800

317. To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway, from Port Burwell to Tilsonburg, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200

318. To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway, from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding $3,200 per mile, nor exceeding in the whole 4,790

319. To the St. Catharines and Niagara Central Railway Company, for 34 miles of their railway from the city of St. Catharines to the city of Hamilton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

320. To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887 ; and for 30 miles of their railway from the western end of the 30 miles first mentioned towards Ottawa, the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, not exceeding $3,200 per mile ; the whole not exceeding..... 118,400

321 Notwithstanding the expiration of the time limited by chapter 2 of 1890, and by the contract entered into with the Quebec Central Railway Company, and notwithstanding anything otherwise in the said chapter 2 contained, the Governor in Council may pay the subsidy granted by the said chapter to the said company at the present worth of the twenty annual payments mentioned in the said chapter (interest computed at four per cent), for and upon the completion of its railway extending from a point between the Chaudière River and Tring Station to a point on the International Railway at or near Lake Megantic, and upon the inspection and acceptance of the same by the Chief Engineer of Railways and Canals, the sum in all of..... 288,000

322. To the Philipsburg Junction Railway and Quarry Company, for $\frac{67}{100}$ mile of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi and a branch to Missisquoi Bay, the balance remaining unpaid of the subsidy granted by chapter 5 of 1892, not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 2,912

323. To the Joliette and St. Jean de Matha Railway Company, for 8 miles of their railway from St. Félix de Valois to St. Jean de Matha, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 23,600

324. To the Lake Temiscamingue Colonization Railway Company, for their railway from Mattawa to the foot of the Kippewa Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $160,000,—also 15 per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not to exceed $15,000 in all, in lieu of the subsidies granted by chapter 5 of 1892,—also the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, for their railway from Long Sault to Lake Kippewa, a subsidy not exceeding $3,200 per mile of railway and 15 per cent on the value of the bridges,—also, a sum of $1,750 additional per mile on their said railway from Mattawa to the foot of the Kippewa Lake; the whole not exceeding 274,940

325. For a railway from St. Placide to St. Andrews, 8 miles, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 25,600

326. For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for 18 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 57,600

327. For a railway from a point on the line of the Canadian Pacific Railway on Isle Jésus, in the county of Laval, towards St. Eustache, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, to the Carillon and Grenville Railway Company, for 12 miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

328. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien, in the said county, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

329. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of $31,500, to be paid out monthly as the work progresses, upon the certificate of the chief engineer of government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken; and for 3 miles of their railway extending from a point 3 miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $9,600, in lieu of the subsidy granted by chapter 3 of 1888; provided that the entire work subsidized upon this railway shall be completed within 4 years from the passing of this Act; the subsidy granted by this Act not to exceed in the whole 41,100

330. To the Pontiac Pacific Junction Railway Company, for the construction or acquisition of 7½ miles of railway, from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $ 24,000

331. To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, less the subsidy granted for the line from Hull to Aylmer, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 73,172

332. To the Harvey Branch Railway Company, for 3 miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding $3,200 per mile, nor exceeding in the whole..... 4,046

333. For a railway from a point on the Intercolonial Railway near Newcastle via Douglastown, to a point on the River Miramichi opposite the town of Chatham, in the province of New Brunswick, 6 miles, in lieu of the subsidy granted by chapter 10 of 1886, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

334. For a railway from some point on the Joggins Railway, near the Hebert River, to Young's Mills, in the province of Nova Scotia, a distance of 5 miles, in lieu of the subsidy granted by chapter 3 of 1889, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

335. To the Woodstock and Centreville Railway Company, for a railway from Woodstock to the international boundary between the province of New Brunswick and the state of Maine, 26 miles, in lieu of the subsidies granted by chapter 24 of 1887 and chapter 2 of 1890 a subsidy not exceeding $3,200 per mile nor exceeding in the whole..... 83,200

336. For 90 miles of the railway from Newport or Windsor to Truro, or to a point between Truro and Stewiacke, and from a point on the said railway to a point at or near Eastville, and from Eastville through the valley of the Musquodoboit River towards a point on the proposed Dartmouth branch of the Intercolonial, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; and also for a railway bridge over the Shubenacadie River on the line of the said railway, a subsidy of 15 per cent on the value of the structure; the whole not exceeding..... 300,000

337. To the Nipissing and James Bay Railway Company, for 25 miles of their railway from, at or near North Bay Station on the Canadian Pacific Railway towards James Bay, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; also for 43 miles of their railway from North Bay towards Lake Tamagaming, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 217,000

338. To the Lotbinière and Mégantic Railway Company, for 15 miles of their railway, in addition to the 15 miles already subsidized and built, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

339. To the Drummond County Railway Company, for 30 miles of their railway from St. Leonard northerly towards a junction with the Intercolonial Railway at Chaudière Junction, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

340. For a railway from Lime Ridge, in the county of Wolfe, in the province of Quebec, northerly through the county of Wolfe and into the county of Megantic, a distance not exceeding 50 miles from Lime Ridge, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 160,000

341. To the Strathroy and Western Counties Railway Company, for 25 miles of their railway from St. Thomas through the counties of Elgin and Middlesex, towards Forest Station or Park Hill, on the Grand Trunk Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

342. To the Parry Sound Colonization Railway Company, for 20 miles of their railway east from Parry Sound, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

343. To the Manitoulin and North Shore Railway Company, for 10 miles of their railway from Little Current to Nelson, on the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

344. To the United Counties Railway Company for 32 miles of their railway from Iberville to Sorel, in addition to the 32 miles already subsidized, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 102,400

345. To the Joliette and St. Jean de Matha Railway Company, for 12 miles of their railway from St. Jean de Matha to Ste. Emelie de L'Energie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

346. To the Great Northern Railway Company, for 22 miles of their railway, from the eastern end of the 15 miles subsidized by chapter 2 of 1893 to a point between Joliette and St. Félix de Valois, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

347. To the Quebec and Lake St. John Railway Company, for 2 miles of the Chicoutimi branch of their railway, from the east end of the 50 miles already subsidized and built eastward to deep water at Chicoutimi, a subsidy not exceeding $3,200 per mile; also for 12 miles from the 52nd mile on the Chicoutimi branch to Ha Ha Bay, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 44,800

348. To the Pontiac and Ottawa Railway Company, for 23 miles of their railway from the point of divergence from the Pontiac Railway to Ferguson's Point, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 73,600

349. To the Ottawa and Gatineau Valley Railway Company, for 20 miles of their railway from the eastern end of the 62 miles already subsidized towards Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

350. To the Canada Eastern Railway Company for 6 miles of their railway from the town of Chatham to Black Brook, a subsidy not exceeding $3,200 per mile; also for 4 miles of their railway for a branch to the village of Nelson, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 32,000

351. For a railway from Cross Creek Station, on the Canada Eastern Railway to Stanley village, in the county of York, in the province of New Brunswick, 6 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

352. To the Restigouche and Victoria Railway Company, for 20 miles of their railway from the western end of the 15 miles subsidized by chapter 5 of 1892, towards Grand Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

353. To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman station to the Newcastle coal fields, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000

354. To the Tobique Valley Railway Company, for 15 miles of their railway from the present terminus at Plaister Rock easterly, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

355. Towards the restoration or renewal of the railway bridge on the South-eastern Railway over the Yamaska River at Yamaska, a subsidy equal to one-third of the actual cost of the renewal of the bridge, but the grant not to exceed in the whole..... 50,000

356. To the Boston and Nova Scotia Coal and Railway Company, for 10½ miles of their railway from the north end of the section already subsidized to Broad Cove, a subsidy not exceeding $3,200 per mile; also for 25 miles of their railway from a point on the Cape Breton Railway at or near Orangedale towards Broad Cove, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; the whole not exceeding 113,600

357. For a railway from Port Hawkesbury towards Cheticamp, 25 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

358. To the Manitoba North-western Railway Company, for 100 miles of the extension of their main line from its present western terminus towards Prince Albert,—the company relinquishing 3,200 acres of the land grant per mile, and the whole road to be operated as a continuous line of railway under one management, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 320,000

359. For a line of railway from the junction of the Elk and Kootenay Rivers to Coal Creek, a distance of 34 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

360. For a railway from Abbotsford Station on the Mission Branch of the Canadian Pacific Railway to the town of Chilliwack, 21 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 67,200

361. To the Nicola Valley Railway Company, for 28 miles of their railway from the western end of the section of their road subsidized by chapter 5, of 1892, towards Nicola Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 89,600

362. To the Nakusp and Slocan Railway Company, for 38 miles of their railway from the town of Nakusp to a point at or near the Forks of Carpenter Creek, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 121,600

363. To the Pontiac and Kingston Railway Company, for 22 miles of a railway from Portage du Fort to Upper Thorne Centre, via Shawville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

364. To the New Glasgow Iron, Coal and Railway Company, for 5 miles of their railway, from Sunnybrae to Kerrogare, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.... 16,000 00

365. To the South Shore Railway Company, for 35 miles of their railway from Yarmouth towards Shelburne and Lockport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 112,000 00

366. To the Cape Breton Railway Extension Company, for 30 miles of railway from Port Hawkesbury to St. Peter's, on their line of railway from Port Hawkesbury to Louisbourg, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

367. For a railway from a point on the Intercolonial Railway between Norton and Sussex Stations towards Havelock, 20 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $ 64,000 00

368. For a railway from St. John to Barneville, for a distance of 10 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000 00

369. For a line of railway from Cap de la Magdeleine to connect with the Piles Branch of the Canadian Pacific Railway, 3 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 9,600 00

370. To the Canada Eastern Railway Company, for an extension of one mile from the western end of their railway, to connect with the Canadian Pacific Railway, a subsidy not exceeding..... ..... 3,200 00

371. To the Great Northern Railway Company, for 30 miles of their railway from its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the River St. Maurice, westward, in lieu of the subsidy granted to the Maskinongé and Nipissing Railway Company by chapter 2 of 1893, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

372. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for 16 miles of their railway from Bobcaygeon to the Midland Railway, and for another 16 miles from the end of the first mentioned 16 miles to Pontypool, in lieu of the subsidies granted by chapter 2 of 1890, and chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 102,400 00

373. To the Montfort Colonization Railway Company, for 12 miles of their railway from the end of the 21 miles already subsidized westward to a point on the Rouge River, in the county of Argenteuil, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

374. For a railway from a point on the Caraquet Railway, at or near Pokemouche siding, towards Tracadie village, 12 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railway and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the

subsidy granted to the Great Northern Railway Company by chapter two of 1893, for fifteen miles from Montcalm to the Canadian Pacific Railway, which shall be paid as follows: on the completion of the eighteen miles from New Glasgow to Montcalm and of two miles out of the fifteen miles from Montcalm to the Canadian Pacific Railway, an instalment proportionate to the value of the ten miles out of the total mileage subsidized by chapter two of 1893, to be established as aforesaid, and the balance of the said subsidy on the completion of the remaining thirteen miles of the said railway.

No subsidies were authorized by 58-59 Vict. (1895), nor by 59 Vict. (1896).

By the Act 60-61, chapter 4, 1897 *(Assented to 29th June, 1897).*

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and includes the amount expended upon any bridge up to and not exceeding twenty-five thousand dollars, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

375. To the Ottawa and New York Railway Company, for $53\frac{87}{100}$ miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by chapter 5 of the statutes of 1892,

376. To the Kingston, Smith's Falls and Ottawa Railway Company, for 101 miles of their railway from Kingston, or a junction with the Grand Trunk Railway at Rideau or some other point near Kingston, to Ottawa, in lieu of the subsidy granted by chapter 5 of 1892;

377. For a railway from a point on the Canadian Pacific Railway, at or near either Welsford or Westfield, or between the said two points, to Gagetown, in the county of Queen's, New Brunswick, not exceeding 30 miles, in lieu of the subsidy granted by chapter 2 of 1890;

378. To the Cobourg, Northumberland and Pacific Railway Company, for 50 miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidies granted by chapter 5 of 1892;

379. To the Ottawa and Gatineau Railway Company, for 20 miles of their railway from the end of the 62nd mile subsidized towards Désert, in lieu of the subsidies granted by chapter 4 of 1894;

380. To the Great Northern Railway Company, for 9 miles of their railway, being shortage in distance between Montcalm and St. Tite;

381. To the St. Gabriel de Brandon and Ste. Emélie de l'Energie Railway Company, for 15 miles of their railway from St. Gabriel to Ste. Emélie de l'Énergie, and 5 miles from a point on the main line to St. Jean de Matha, making in all 20 miles, in lieu of the subsidy granted by chapter 4 of 1894;

382. To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman Station to Newcastle Coal Fields, county of Queen's, in lieu of the subsidy granted by chapter 4 of 1894;

383. To the Gulf Shore Railway Company, for 5½ miles of their railway from the end of the section subsidized to Tracadie and thence to Big Tracadie, New Brunswick;

384. For a railway from Campbellton, on the Intercolonial Railway, towards Grand Falls, New Brunswick, a distance of 20 miles, commencing at Campbellton, in lieu of the subsidy granted by chapter 4 of 1894;

385. To the Pontiac Pacific Junction Railway Company, for 7½ miles of their railway from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890;

386. To the Schomberg and Aurora Railway Company, for 15 miles of their railway from a point on the Grand Trunk Railway between King and Newmarket to Schomberg, in the province of Ontario;

387. To the Tilsonburg, Lake Erie and Pacific Railway Company, for $3\frac{50}{100}$ miles of their railway from the present terminus, through Tilsonburg to the Michigan Central Railway, in the province of Ontario.

388. To the Ottawa, Arnprior and Parry Sound Railway Company, for 52 miles of their railway, from the crossing of the Northern Pacific Junction Railway to 55 miles west of Barry's Bay, and also for 4 miles of their railway across Parry Island;

389. To the Pembroke Southern Railway Company, for 20 miles of their railway from Pembroke to Golden Lake, in the province of Ontario;

390. To the Ontario and Rainy River Railway Company, for 80 miles of their railway from the Port Arthur, Duluth and Western Railway to Rainy Lake, in the province of Ontario;

391. To the Strathroy and Western Counties Railway Company, for 7 miles of their railway, commencing at a point at or near Caradoc Station on the Canadian Pacific Railway and extending to the town of Strathroy;

392. To the Phillipsburg Railway and Quarry Company, for $\frac{66}{100}$ mile of their railway from the end of the subsidized section to the government wharf at Phillipsburg;

393. To the United Counties Railway Company, for 1 mile of their railway from Johnson to St. Grégoire Station, in the province of Quebec;

394. To the St. Lawrence and Adirondack Railway Company, for 13½ miles of their railway from Beauharnois to Caughnawaga, in the province of Quebec;

395. To the East Richelieu Valley Railway Company, for 24 miles of their railway from Iberville to St. Thomas, boundary of Missisquoi County, in the province of Quebec;

396. To the Portage du Fort and Bristol Branch Railway Company, for 15 miles of their railway to a point at or near Shawville, in the county of Pontiac;

397. For a railway from a point at or near Windsor Junction, on the Intercolonial Railway, to Upper Musquodoboit, for a distance of 40 miles;

398. To the St. Stephens and Milltown Railway Company, for $1\frac{14}{100}$ mile of their railway from Milltown to St. Stephen, in the province of New Brunswick;

399. For a railway from Sunny Brae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysboro', in the province of Nova Scotia, a distance of 65 miles;

400. For a railway from Port Hawkesbury, Nova Scotia, to Port Hood and Broad Cove, 53 miles, in lieu of the subsidy granted by chapter 4 of 1894;

401. For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles;

402. For a railway from Indian Garden on the line of the Central Railway, to Shelburne, in the province of Nova Scotia, a distance of 35 miles;

403. To the Coast Railway Company of Nova Scotia, for 61 miles of their railway from Yarmouth to Port Clyde, in the province of Nova Scotia;

404. For a railway from Brookfield Station on the Intercolonial Railway to Eastville, 30 miles;

405. To the Great Northern Railway Company, for 35 miles of their railway from St. Jérôme, in the province of Quebec, to Hawkesbury, in the province of Ontario;

406. To the Drummond County Railway Company, for 42½ miles of their railway from Moose Park to Chaudière River, provided that the amount of the said subsidy shall be refunded to the Government of Canada in the event of the company's railway from Ste. Rosalie to Chaudière River being purchased or leased for a term of years by the government.

3. The Governor in Council may grant the subsidies hereinafter mentioned to the railway companies and towards the construction of the railways also hereinafter mentioned, that is to say:—

407. To the Great Northern Railway Company, for 67 miles of their railway between Montcalm and its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the St. Maurice River, the balance remaining unpaid of the subsidies granted by chapter 2 of 1893, and by chapter 4 of 1894, between these points, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	$ 182,400 00
408. To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, also for bridging the Ottawa River, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, and by chapter 4 of 1894, not exceeding	114,272 00
409. To the Ottawa and Gatineau Railway Company, for 62 miles of their railway from Hull towards Désert, in the province of Quebec, the balance remaining unpaid of the subsidy granted by chapter 2 of 1893, not exceeding in the whole	35,872 00
410. To the Grand Trunk Railway Company of Canada, for a subsidy towards the rebuilding and enlargement of the Victoria Bridge at Montreal over the St. Lawrence River, 15 per cent upon the amount expended thereon, not exceeding	300,000 00
411. To the Montfort Colonization Railway Company, for 33 miles of their railway from Montfort Junction to Arundel, in the province of Quebec, a subsidy not exceeding $2,000 per mile, nor exceeding in the whole	66,000 00
412. To the Irondale, Bancroft and Ottawa Railway Company, the balance remaining unpaid of the subsidy for the last five miles of the company's railway; the eastern terminus to be either at the village of Bancroft or at some point near the Hastings Road, in the township of Herschell, in lieu of the subsidy granted by chapter 2 of 1893, not exceeding in the whole	16,000 00
413. To the Great Northern Railway Company, towards the construction of a railway bridge over the Ottawa River at Hawkesbury, 15 per cent upon the amount expended thereon, not exceeding	52,500 00
414. For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa and the city of Hull, 15 per cent upon the amount expended thereon, not exceeding	112,500 00

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and

upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

5. The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

6. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect of which it is hereinbefore otherwise provided.

7. Any company receiving a subsidy as aforesaid, in excess of $3,200 per mile, shall be bound to carry Her Majesty's mails for a term of ten years free of charge over the portion of railway subsidized.

By the Special Act 60-61 Victoria, Chapter 5, 1897. *(Assented to 29th June, 1897.)*

1. Subject to the conditions hereinafter mentioned, the Governor in Council may grant to the Canadian Pacific Railway Company a subsidy towards the construction of a railway from Lethbridge, in the district of Alberta, through the Crow's Nest Pass to Nelson, in the province of British Columbia (which railway is hereinafter called "the Crow's Nest Line,") to the extent of eleven thousand dollars per mile thereof, and not exceeding in the whole the sum of three million six hundred and thirty thousand dollars, payable by instalments on the completion of each of the several sections of the said railway of the length respectively of not less than ten miles, and the remainder on the completion of the whole of the said railway; provided that an agreement between the Government and the company is first entered into in such form as the Governor in Council thinks fit, containing covenants to the following effect, that is to say:—

On the part of the company:

(*a*.) That the company will construct or cause to be constructed, the said railway upon such route and according to such descriptions and specifications and within such time or times as are provided for in the said agreement, and, when completed, will operate the said railway for ever;

(*b*.) That the said line of railway shall be constructed through the town of Macleod, and a station shall be established therein, unless the Governor in Council is satisfied by the company that there is good cause for constructing the railway outside the limits of the said town, in which case the said line of railway shall be located and a station established at a distance not greater than five hundred yards from the limits of the said town;

(*c*.) That so soon as the said railway is opened for traffic to Kootenay Lake, the local rates and tolls on the railway and on any other railway used in connection therewith and now or hereafter owned or leased by or operated on account of the company south of the company's main line in British Columbia, as well as the rates and tolls between any point on any such line or lines of railway and any point on the main line of the company throughout Canada, or any other railway owned or leased by or operated on account of the company, including its lines of steamers in British Columbia, shall be first approved by the Governor in Council or by a railway commission, if and when such commission is established by law, and shall at all times thereafter and from time to time be subject to revision and control in the manner aforesaid;

(*d*.) That a reduction shall be made in the general rates and tolls of the company as now charged, or as contained in its present freight tariff, whichever rates are now the lowest, for carloads or otherwise, upon the classes of merchandise hereinafter mentioned, westbound, from and including Fort William and all points east of Fort

William on the company's railway to all points west of Fort William on the company's main line, or on any line of railway throughout Canada owned or leased by or operated on account of the company, whether the shipment is by all rail line or by lake and rail, such reduction to be to the extent of the following percentages respectively, namely :—

Upon all green and fresh fruits, 33⅓ per cent ;

Coal oil, 20 per cent ;

Cordage and binder twine, 10 per cent ;

Agricultural implements of all kinds, set up or in parts, 10 per cent ;

Iron, including bar, band, Canada plates, galvanized, sheet, pipe, pipe-fittings, nails, spikes and horse shoes, 10 per cent ;

All kinds of wire, 10 per cent ;

Window glass, 10 per cent ;

Paper for building and roofing purposes, 10 per cent ;

Roofing felt, box and packing, 10 per cent ;

Paints of all kinds and oils, 10 per cent ;

Live stock, 10 per cent ;

Wooden ware, 10 per cent ;

Household furniture, 10 per cent ;

And that no higher rates than such reduced rates or tolls shall be hereafter charged by the company upon any such merchandise carried by the company between the points aforesaid ; such reductions to take effect on or before the first of January, one thousand eight hundred and ninety-eight ;

(*e.*) That there shall be a reduction in the company's present rates and tolls on grain and flour from all points on its main line, branches or connections, west of Fort William to Fort William and Port Arthur and all points east, of three cents per one hundred pounds, to take effect in the following manner :—One and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-eight, and an additional one and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-nine ; and that no higher rates than such reduced rates or tolls shall be charged after the dates mentioned on such merchandise from the points aforesaid ;

(*f.*) That the Railway Committee of the Privy Council may grant running powers over the said line of railway and all its branches and connections, or any portions thereof, and all lines of railway now or hereafter owned or leased by or operated on account of the company in British Columbia south of the company's main line of railway, and the necessary use of its tracks, stations and station grounds, to any other railway company applying for such grant upon such terms as such committee may fix and determine, and according to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament ; but nothing herein shall be held to imply that such running powers might not be so granted without the special provision herein contained ;

(*g.*) That the said railway, when constructed, together with that portion of the company's railway from Dunmore to Lethbridge, and all lines of railway, branches, connections and extensions in British Columbia south of the main line of the company in British Columbia shall be subject to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament ;

(*h.*) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it, as stipulated for in the said agreement, become entitled to and shall get any land as a subsidy from the Government of British Columbia, then such lands, excepting therefrom those which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, shall be disposed of by the company or by such other company to the public according to regulations and at prices not exceeding these prescribed from time to time by the Governor in Council, having regard to the then existing provincial regulations applicable thereto ; the expression "lands" including all mineral and timber thereon which shall be disposed of as aforesaid, either with or without the land, as the Governor in Council may direct :

(*i.*) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it as stipulated for in the said agreement, become entitled to and shall get any lands as a subsidy from the Government of British Columbia which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, then the company will cause to be conveyed to the Crown, in the interest of Canada, a portion thereof to the extent of fifty thousand acres, the same to be of equal value per acre as coal lands with the residue of such lands. The said fifty thousand acres to be selected by the Government in such fair and equitable manner as may be determined by the Governor in Council, and to be thereafter held or disposed of or otherwise dealt with by the Government as it may think fit on such conditions, if any, as may be prescribed by the Governor in Council, for the purpose of securing a sufficient and suitable supply of coal to the public at reasonable prices, not exceeding two dollars per ton of two thousand pounds free on board cars at the mines.

And on the part of the Government, to pay the said subsidy by instalments as aforesaid.

2. The company shall be bound to carry out in all respects the said agreement, and may do whatever is necessary for that purpose.

3. In order to facilitate such financial arrangements as will enable the company to complete the railway as aforesaid without delay and to acquire and consolidate with it the railway from Dunmore to Lethbridge, hereinafter called "the Alberta Branch," which, under the authority of chapter thirty-eight of the statutes of 1893, it now operates as lessee, and is under covenant to purchase, the company may issue bonds which will be a first lien and charge and be secured exclusively upon the said Alberta Branch and Crow's Nest Line together in the same way and with the same effect as if both the said pieces of railway to be so consolidated were being built by the company as one branch of its railway within the meaning of section one of chapter fifty-one of the statutes of 1888, and that section shall apply accordingly, such first lien to be subject to the payment of the purchase money of the Alberta Branch, as provided for in the said covenant to purchase.

By the Act 63–64 Vic., chapter 8 (*Assented to July 18, 1900*).

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost and shall include the amonnt expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

415. To the Central Ontario Railway Company, for an extension of their railway from, or from near, either Coe Hill or Rathbun Station on the company's railway to, or near to Bancroft, not exceeding 21 miles, in lieu of the subsidy granted by chapter 5 of 1892;

416. To the Great Northern Railway Company, for a railway between Montcalm and St. Tite Junction, on the Lower Laurentian Railway, Quebec, not exceeding 53½ miles; and for a branch from their main line to Shawenegan Falls, Quebec, not exceeding 6½ miles.

417. To the Phillipsburg Railway and Quarry Company, shortage in the extension of their railway from a point on the company's line at or near the end of the subsidized section, to the government wharf at Phillipsburg, Quebec, not exceeding $\frac{66}{100}$ of a mile;

418. To the Strathroy and Western Counties Railway Company, for a line from Strathroy, Ontario, via Adelaide and Arkona, to either Forest, Tedford, or Park Hill, not exceeding 24 miles, in lieu of the subsidy granted by chapter 4 of 1894;

419. To the St. John Valley and Rivière du Loup Railway Company, for a line of railway from Fredericton, in the county of York, New Brunswick, to Woodstock, in the county of Carleton, not exceeding 59 miles;

420. For a railway from Port Hawkesbury, on the Strait of Canso, Nova Scotia, to St. Peter's, not exceeding thirty miles;

421. For a railway from Windsor, Nova Scotia, to Truro, via the township of Clifton, not exceeding 58 miles, in lieu of the subsidy granted by chapter 4 of 1894;

422. For a railway from a point at or near Brookfield Station, Nova Scotia, on the Intercolonial Railway, to Eastville, not exceeding 25 miles, in lieu of the subsidy granted by chapter 4 of 1897;

423. For a railway from Cross Creek Station, on the Canada Eastern Railway, to Stanley Village, New Brunswick, not exceeding 6 miles;

424. For a railway from the village of St. Rémi to Stottville or some point on the Delaware and Hudson Railway (Grand Trunk) in the parish of St. Paul de l'Ile aux Noix, not exceeding 19 miles;

425. For a railway between Pontypool and Bobcaygeon, via Lindsay, Ontario, not exceeding 40 miles.

426. To the Pontiac Pacific Junction Railway Company, for a railway from Aylmer to Hull, Quebec, not exceeding 9 miles, in lieu of the subsidy granted by chapter 4 of 1897;

427. To the Portage du Fort and Bristol Branch Railway Company, for a branch line from a point on the Pontiac Pacific Junction Railway at or near the village of Quyon, towards the village of Portage du Fort, Quebec, not exceeding 15 miles, in lieu of the subsidy granted by chapter 4 of 1897;

428. To the Orford Mountain Railway Company, for a branch from their railway from a point between Lawrenceville and Eastman to Waterloo, not exceeding 13 miles;

429. To the Atlantic and Lake Superior Railway Company, for an extension of their railway from Caplin to Paspebiac, Quebec, not exceeding 30 miles;

430. To the United Counties Railway Company, for a railway from St. Robert Junction to Sorel, 6½ miles, (this sudsidy to be payable only in the event of adequate running rights over the South-eastern Railway between the two points above mentioned not being granted to the first mentioned Company on terms to be approved by the Railway Committee of the Privy Council,) and from Mount Johnson to St. Grégoire Station, 1 mile, not exceeding 7½ miles.

431. For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia, via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles;

432. For a railway from Indian Gardens, Queen's County, Nova Scotia, to Shelburne, in the said province, a distance of 35 miles;

433. The subsidy which the Ontario and Rainy River Railway Company is entitled to receive under chapter 4 of 1897, shall be $6,400 per mile for the 80 miles mentioned in the said Act; not exceeding in all $512,000.

434. To the Bay of Quinté Railway Company, for such extensions, branches or additions to their system as will enable the said Company to connect their lines of railway or connecting lines with iron or other mines or mineral or wood lands in the counties of Peterborough, Northumberland, Hastings, Lennox and Addington, Frontenac or Leeds, payable in instalments regulated by the length of each of the said extensions or branches or additions, as the case may be, in lieu of part of the balance remaining unpaid of the subsidy granted to the Kingston, Napanee and Western Railway Company, by chapter 5 of 1892, but not exceeding $3,200 per mile for 10 miles, nor exceeding in the whole $32,000;

435. To the Quebec and Lake St. John Railway Company, for 12 miles of their railway from the end of their line at deep water on the Chicoutimi branch of their railway, to Ha Ha Bay, in the lieu of the subsidy for the 12 miles granted by chapter 4 of 1894;

436. For a line of railway from Hawkesbury, Ontario, to South Indian, not exceeding 35 miles;

437. For a railway from Sault Ste. Marie, Ontario, towards Michipicoten River and harbour and towards the main line of the Canadian Pacific Railway, not exceeding 40 miles;

438. For a branch line of railway from the main line of the Ottawa, Arnprior and Parry Sound Railway to the town of Parry Sound, Ontario, not exceeding 5 miles;

439. For a railway from the village of Haliburton, via the village of Whitney, towards the town of Mattawa, Ontario, not exceeding 20 miles;

440. For an extension of the Tilsonburg, Lake Erie and Pacific Railway, from Tilsonburg to Ingersoll or Woodstock, Ontario, not exceeding 28 miles;

441. To the South Shore Railway Company, from Sorel Junction along the South Shore to Lotbinière, Quebec, a distance not exceeding 82 miles;

442. To the Massawippi Valley Railway Company for an extension of their railway to the village of Stanstead Plain, Quebec, not exceeding 2½ miles;

443. For a railway from Port Hawkesbury on the Strait of Canso, to Caribou Cove, Nova Scotia, a distance of 10 miles;

444. For a railway from Fort Frances, Ontario, westerly to a point at or near the mouth of Rainy River, a distance not exceeding 70 miles;

445. To the Central Railway Company of New Brunswick, for an extension of their line of railway from Newcastle Coal Fields to Gibson, New Brunswick, not exceeding 30 miles;

446. To the Canadian Northern Railway Company, for a railway from a point on the present line of the Winnipeg Great Northern Railway north of Swan River to Prince Albert, North-west Territories, not exceeding 100 miles;

447. For a railway from some point near Antler Station to a point near Moose Mountain, Manitoba, not exceeding 50 miles;

448. For a railway from Sunnybrae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, Nova Scotia, to make up the deficiency in mileage between points mentioned and subsidized by chapter 4 of 1897, additional mileage not exceeding 15 miles;

449. For a railway from Port Clyde towards Lockeport, in the province of Nova Scotia, not exceeding 20 miles;

450. For a railway from a point on the Intercolonial Railway at or near Halifax towards the Central Railway in the county of Lunenburg, not exceeding 20 miles;

451. For a railway from Labelle, in the province of Quebec, in a north-westerly direction, to Nominingue, via Notre Dame de l'Annonciation, a distance not exceeding 22 miles;

452. For a railway from Owen Sound, in the province of Ontario, to Meaford, not exceeding 21 miles;

453. To the Ottawa and Gatineau Railway Company, for their line of railway in and through the city of Hull, Quebec, not exceeding 4 miles;

454. To the Western Alberta Railway Company, from a point on the United States boundary, west of Range 27, north-westerly towards Anthracite, in the district of Alberta, not exceeding 50 miles ;

455. To the Edmonton, Yukon and Pacific Railway Company, for a railway from the town of South Edmonton, North-west Territories, to North Edmonton, and thence westerly towards the Yellow Head Pass, a distance not exceeding 50 miles ;

456. To the Restigouche and Western Railway Company, in addition to the 20 miles subsidized by chapter 4 of 1897, and in continuation from the westerly end of the said 20 miles towards the St. John River, a further distance not exceeding 15 miles, and for the company's railway from a point on the St. John River, New Brunswick, at or near Grand Falls, or St. Leonard, or between Grand Falls and St. Leonard, and extending easterly towards Campbellton, such point to be approved by the Governor in Council, a distance of 12 miles ; in all not exceeding 27 miles ;

457. For a railway in extension of the St. Francis branch of the Temiscouata Railway to the mouth of the St. Francis River, a distance not exceeding 3 miles ;

458. To the Canada Eastern Railway Company, for a line of railway from Nelson, New Brunswick, to connect with the company's main line running into Chatham, to complete the connection from Nelson to such main line, not exceeding in the whole $2\frac{1}{4}$ miles ;

459 To the Bay of Quinté Railway Company, for an extension of their line in a westerly direction from a point at or near Richmond boundary road near Deseronto for a distance not exceeding 2 miles ; also for an extension of their line from its present terminus at Tweed in a northerly direction for a distance of 2 miles, and for an extension of their line from the end of the last 2 miles mentioned in a northerly direction for a distance not exceeding 3 miles—in all 7 miles ; subsidies payable on each of the sections mentioned as each of such sections is completed ;

460. To the Ontario, Belmont and Northern Railway Company, for an extension of their railway from its present terminus at Iron Mines in a north-westerly direction, a distance not exceeding 5 miles ; and also for an extension of the company's railway southerly, from the present southern terminus thereof to the Central Ontario Junction of the Canadian Pacific Railway, a distance not exceeding 2 miles ; but the last mentioned aid for the said 2 miles of railway shall not be granted in case the Railway Committee of the Privy Council finds that adequate running powers on fair terms can be secured to the company over that portion of the line of the Central Ontario Railway between the present southerly end of the Ontario, Belmont and Northern Railway and the Canadian Pacific Railway Company's line at Central Ontario Junction ; subsidies payable on each of the sections mentioned as each of such sections is completed ;

461. For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, Ontario, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, not exceeding 20 miles ;

462. For a line of railway from Paspebiac, Quebec, to Gaspé in the said province, a distance not exceeding 82 miles ;

463. To the Lake Erie and Detroit River Railway Company, for a line of railway from Ridgetown, Ontario, to St. Thomas, in the said province, a distance not exceeding 44 miles ; this subsidy to be payable only in the event of adequate running rights over the Canada Southern Railway between the two points above mentioned not being granted to the first mentioned company on terms to be approved by the Railway Committee of the Privy Council ;

464. To the Kingston and Pembroke Railway Company, for the construction of branches from the Company's main line to the iron mine at Bluff Point and to the Martele mine in the county of Renfrew, not exceeding 5 miles ;

465. For a railway from the town of Parry Sound extending northerly towards Sudbury, a distance not exceeding 20 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction of the railways also hereinafter mentioned, that is to say :—

466. The Ontario and Rainy River Railway Company, for a railway from a point 80 miles west of Stanley Station, on the Port Arthur, Duluth and Western Railway, to Fort Frances, for a distance of 140 miles, at $6,400 per mile, not exceeding in the whole	$ 896,000 00
467. To the Quebec Bridge Company, towards the construction of a railway bridge over the St. Lawrence River, at Chaudière Basin, near Quebec, one million dollars, 40 per cent of which amount may be paid on monthly progress estimates, approved by the Government engineers, of materials delivered and work done...	1,000,000 00
468. To the South Shore Railway Company, towards the restoration and renewal of the railway bridge over the Yamaska River at Yamaska, Quebec	50,000 00
469. Towards the construction of a bridge over the Richelieu River at Sorel, 15 per cent upon the amount expended thereon, not exceeding	35,000 00
470. Towards the construction of a bridge across the St. Francis River, 15 per cent of the amount expended thereon, not exceeding	50,000 00
471. Towards the construction of a bridge across the Nicolet River, 15 per cent upon the amount expended thereon, not exceeding	15,000 00
472. To the Midland Railway Company, Limited, towards the construction of a bridge across the Shubenacadie River, 15 per cent upon the amount expended thereon, not exceeding	33,750 00
473. To the Great Northern Railway Company, towards the construction of a bridge across the St. Maurice River, 15 per cent upon the amount expended thereon, not exceeding	16,425 00
474. Also towards the construction of a bridge across the Rivière du Loup, 15 per cent upon the amount expended thereon, not exceeding	15,000 00
475. Also towards the construction of a steel bridge and viaduct at the Maskinongé River, 15 per cent upon the amount expended thereon, not exceeding	15,000 00

4. The subsidies granted to the Ontario and Rainy River Railway Company, the Canadian Northern Railway Company and the Edmonton, Yukon and Pacific Railway Company are granted upon the condition, and, if received and paid under the authority of this Act to the above mentioned companies respectively, shall be received upon the condition, that the said companies shall not, nor shall any of them, at any time amalgamate with, or lease its line or lines to, any railway company other than those mentioned in this section, except as may be authorized by Parliament; nor shall any of the said railways be leased to or operated by any other company; nor shall any of the said companies make an agreement for a common fund or for pooling its receipts with any other railway company; and any such lease, amalgamation or agreement shall be absolutely void, excepting in so far as such agreement may extend to traffic or running arrangements which have been approved by the Governor in Council.

5. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of

which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

7. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect to which it is hereinbefore otherwise provided.

8. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and in case of disagreement, then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

By the Act 62-63 Vic., chapter 7 (*Assented to 11th August, 1899*)

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his

opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile :—

476. For a railway from a point at or near the junction of the Irondale, Bancroft and Ottawa Railway and the Grand Trunk Railway to the village of Minden, in the county of Haliburton, Ontario, not exceeding 12 miles.

477. To the Strathroy and Western Counties Railway Company, for a railway commencing at a point at or near Caradoc station, on the Canadian Pacific Railway, and extending to the town of Strathroy, Ontario, not exceeding 7 miles.

478. For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, Ontario, for the further extension of such railway westerly from the western terminus of the 20 miles subsidized by chapter 4 of 1897, for a distance not exceeding 20 miles.

479. To the Algoma Central Railway Company for 25 miles of its line of railway from its terminus at Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway, and for a further extension of this company's line of railway from Sault Ste. Marie towards Michipicoten River and Harbour, Ontario, towards the main line of the Canadian Pacific Railway, 25 miles in all, not exceeding 50 miles.

480. To the Central Ontario Railway Company, for a further extension of their railway from, at or near Bancroft to a point on the Canada Atlantic Railway between Whitney and Barry's Bay, Ontario, not exceeding 20 miles.

481. To the Manitoulin and North Shore Railway Company, for a line of railway between Little Current, on Manitoulin Island, and Sudbury, Ontario, on the Canadian Pacific Railway, the company undertaking to bridge between Little Current and the main land, the bridge to be so constructed and maintained as to afford suitable facilities, in the opinion of the Minister of Railways and Canals, for free vehicular and passenger traffic, the same as upon a public highway, the work to be begun and prosecuted from Little Current and Sudbury, one-half of the subsidy to be applicable, as earned, in respect of the work beginning at Little Current and carried on towards Sudbury, and one-half thereof to be applicable, as earned, in respect of the work beginning at Sudbury and carried on towards Little Current, the course of the line of railway to cross the Sault Ste. Marie branch of the Canadian Pacific Railway, not exceeding 66 miles.

482. For a railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, not exceeding 15 miles.

483. For a railway beginning at a point northerly 20 miles from Parry Sound, and extending from that point to the French River, Ontario, not exceeding 35 miles.

484. For a railway from a point 20 miles north-easterly from the village of Haliburton, via the village of Whitney, towards the village of Mattawa, Ontario, not exceeding 40 miles.

485. To the Kingston and Pembroke Railway Company, for a branch line of railway to iron mines in Bedford township, Ontario, not exceeding 12 miles.

486. To the Thousand Islands Railway Company for an extension of their railway from the present northerly terminus to a point easterly thereof, not exceeding 2 miles;

And also for an extension from a point on the railway to connect their railway with the Brockville, Westport and Sault Ste Marie Railway, the Bay of Quinté Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, the balance remaining of the subsidy granted by chapter 5 of 1892, not exceeding 9½ miles.

487. For a railway from Dyment, on the Canadian Pacific Railway, to the New Klondike mining district, Ontario, not exceeding 7 miles.

488. To the Schomberg and Aurora Railway Company, for an extension of their line from its easterly terminus to a point at or near Bond's Lake, Ontario, not exceeding 4 miles.

489. To the Nipissing and James Bay Railway Company, for a railway from, at or near North Bay station, on the Canadian Pacific Railway, towards James Bay, or Lake Tamagaming, Ontario, not exceeding 20 miles.

490. In aid of the Ottawa and New York Railway Company's bridge over the St. Lawrence River, and for the Canadian portion of such bridge, a sum not exceeding $90,000.

491. To the Grand Trunk Railway Company of Canada, towards the cost of the rebuilding and enlargement of the Victoria Bridge over the St. Lawrence River, Quebec, in addition to the amount received by the company on account of the subsidy granted by chapter 4 of 1897, viz: $270,000, to make up the grant in aid of the undertaking to $500,000, upon condition that the tolls upon the bridge for passenger and vehicular traffic shall be subject to the approval of the Governor in Council, a sum not exceeding $230,000.

492. For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa, Ontario, and the city of Hull, Quebec, upon condition that the bridge be so constructed as to provide suitable facilities, to the satisfaction of the Minister of Railways and Canals, for free vehicular and foot passenger traffic, the same as upon a public highway, in addition to the $112,500 already granted,—and, notwithstanding anything in the said Act, the subsidy hereby granted, together with the grant of $112,500 under chapter 4 of 1897, shall be paid upon the completion of the bridge and its approaches, upon the Chief Engineer's report of such completion, and the recommendation of the Minister,—a sum not exceeding $100,000.

493. To the Canadian Northern Railway Company, in further extension of their railway north of Swan River towards Prince Albert, North-west Territories, in addition to the grant by chapter 7 of 1899, a further mileage not exceeding 100 miles.

494. For a railway from the westerly end of the Waskada branch of the Canadian Pacific Railway, Manitoba, further westward, not exceeding 20 miles.

495. For a railway from a point on the Alberta Railway and Coal Company's Railway towards Cardston, Alberta, N.W.T., for 30 miles of railway at $2,500 per mile.

496. To the Kaslo and Lardo-Duncan Railway Company, for a railway from Duncan Lake towards Lardo or Arrow Lake, British Columbia, or from Lardo to Arrow Lake, not exceeding 30 miles.

497. To the Restigouche and Western Railway Company, for the company's railway, in addition to the 15 miles subsidized by chapter 7 of 1899, on the easterly section of the line, and in continuation from the westerly end of the said 15 miles, a further distance of 15 miles towards the St. John River; and for the said railway, in addition to the 12 miles subsidized by the said chapter on the westerly section of the said line, a further distance from the easterly end thereof of 15 miles, towards Campbellton, N.B., not exceeding 30 miles.

498. For a line of railway from St. Charles Junction on the Intercolonial Railway towards the St. Francis branch of the Temiscouata Railway, Quebec, not exceeding 45 miles, and from the mouth of the St. Francis River, N.B., westerly towards St. Charles Junction, 15 miles, in all not exceeding 60 miles.

499. For a line of railway from Bristol, in the county of Carleton, New Brunswick, on the Canadian Pacific Railway, easterly, a distance not exceeding 17 miles.

500. For a line of railway from Shediac, county of Westmorland, New Brunswick, to Shemogue, and towards Cape Tormentine, in the said county, a distance not exceeding 38 miles.

501. For a railway from Lockeport, Nova Scotia, to Sable River, or other convenient point of railway connection, not exceeding 20 miles.

502. To the Inverness and Richmond Railway Company, for a railway in extension of the company's line northward from Broad Cove to Cheticamp, C.B., Nova Scotia, not exceeding 40 miles.

503. For a railway from Bridgetown to Victoria Beach, Nova Scotia, not exceeding 30 miles.

504. For a railway from a point on the Intercolonial Railway, Pictou branch, to Kempt Town, county of Colchester, Nova Scotia, not exceeding 4½ miles.

505. For a railway from Brazil Lake, on the Dominion Atlantic Railway, to Kemptville, Nova Scotia, not exceeding 11 miles.

506. To the Montfort and Gatineau Colonization Railway Company, to enable it to extend its railway from Arundel to a point in the municipality of the united townships of Preston and Hartwell, province of Quebec, not exceeding 30 miles.

507. To the Chateauguay and Northern Railway Company, for a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway, in or near the town of Joliette, passing near the town of L'Assomption, Quebec, together with a spur into the said town, not exceeding 42 miles.

508. To the Chateauguay and Northern Railway Company, for a single-track standard railway bridge, with two roadways 10 feet wide, for free vehicular and foot passenger traffic, the same as upon a public highway, from Bout L'Isle to Charlemange, at the junction of the Ottawa and St. Lawrence rivers, $150,000.

509. To the Chateauguay and Northern Railway Company, towards the construction of a bridge across the Lac Ouareau River, $15,000.

510. To the Arthabaska Railway Company, for a railway from Victoriaville to West Chester, province of Quebec, a distance not exceeding 12 miles.

511. To the Great Northern Railway Company, for a branch line from the town or from near the town of Joliette towards Ste. Emélie, touching the parishes of Ste. Beatrix and Ste. Jean de Matha, not exceeding 20 miles.

512. For a railway from Farnham, province of Quebec, to Frelighsburg and the International Boundary Line, not exceeding 21 miles.

513. Towards the construction of a railway bridge over the St. Francis River, in lieu of the grant under chapter 7 of 1899, at St. François du Lac, on the condition that the bridge, with approaches, be built so as to allow the municipalities to make use thereof, to establish and maintain a suitable roadway for the free passage of foot passengers, vehicles and animals, to be approved by the Minister of Railways and Canals, $50,000.

514. Towards the construction of a railway bridge over the Nicolet River at Nicolet, in lieu of the grant under chapter 7 of 1899, $15,000.

515. For a line of railway from Halifax towards a point on the Central Railway of Nova Scotia, in the county of Lunenburg, in addition to and in extension of the 20 miles subsidized by chapter 7 of 1899, not exceeding 20 miles.

3. The subsidies hereby granted and any subsidies heretofore granted under any Act of the Parliament of Canada, still in force, but not fully paid, towards the construction of any railway or bridge, shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless in this Act otherwise expressly provided, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :

(*a*) upon the completion of the work subsidized ; or

(*b*.) by instalments on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken · or

(*c.*) upon progress estimates on the certificate of the Chief Engineer of Railways and Canals, that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than sixty thousand dollars; or

(*d.*) with respect to (*b*) and (*c*), part one way, part the other.

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the government, which agreement the government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

5. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

6. The Governor in Council may make it a condition of the subsidies hereby granted, or of any heretofore granted by any Act of Parliament as to which a contract has not yet been entered into between Her Majesty and the company for the construction of the railway, that the company shall lay its road with new steel rails made in Canada, if such rails are procurable in Canada of suitable quality upon terms as favourable as other rails can be obtained upon, of which the Minister of Railways and Canals shall be the judge.

7. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the minister of the department of the government for which such service is being performed and the company performing it, and in case of disagreement then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

8. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

9. Paragraph 20 of section 2 of chapter 7 of the statutes of 1899 is amended by inserting after the word 'railway,' in the third line, the words 'or to connect the said lines.'

10. The subsidy provided for by chapter 7 of the statutes of 1899 towards the construction of a railway bridge over the St. Lawrence River at Chaudière Basin, near Quebec, shall be deemed to be applicable, as to one-third thereof, to the substructure and approaches, and as to two-thirds thereof to the superstructure, and the said subsidy may be paid upon that basis by authority of the Governor in Council, upon progress estimates to be furnished from time to time by the Chief Engineer of Government Railways and Canals, so that one-third of such subsidy, and no more, may be paid in respect of and upon completion of the masonry of the substructure and approaches of the said bridge, one-third, and no more, upon the work and material of one-half of the superstructure being done and supplied, in respect of such work and material, and the remaing one-third upon the completion of the whole work.

By the Act 1st Edward VII., chapter 7 (*Assented to May 23, 1901.*)

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile;—

516. For a line of railway from a point on the Intercolonial Railway at or near New Glasgow to Country Harbour, Nova Scotia, and from a point at or near Country Harbour Cross Roads to Guysborough, in lieu of the subsidies granted by 1897, cap. 4, and 1899, cap. 7, sec. 2, paragraph 34, not exceeding 80 miles.

517. To the Quebec and New Brunswick Railway Company, for a line of railway from a point at or near St. Charles or at or near Chaudière Junction or a point on the Quebec Central Railway, near St. Anselme, Quebec, towards the present terminus of the St. Francis Branch of the Témiscouata Railway, New Brunswick, not exceeding 45 miles, and for a line of railway from the mouth of the St. Francis River, New Brunswick, westerly towards Chaudière Junction, not exceeding 15 miles, in lieu of the subsidy granted by 1900, cap, 8, sec. 2, paragraph 23; also for a line of railway in extension of the St. Francis Branch of the Témiscouata Railway to the mouth of the St. Francis River, New Brunswick, in lieu of the subsidy granted by 1899, cap. 7, sec. 2, paragraph 43, not exceeding 3 miles; in all not exceeding 63 miles.

518. To the Montreal and Province Line Railway Company, for a line of railway from Farnham, Quebec, to Frelighsburg, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 37, not exceeding 19 miles.

519. For a line of railway from a point on the Intercolonial Railway at or near Windsor Junction to Upper Musquodoboit, in lieu of 1897, cap. 4, sec. 2, paragraph 23, not exceeding 40 miles.

520. For a line of railway from Pubnico, Nova Scotia, to Port Clyde or Clyde River, in lieu of the unexpended balance of subsidy granted by 1897, cap. 4, sec. 2, paragraph 29, not exceeding 31 miles.

521. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from the western terminus of the 20 miles subsidized by 1899, cap. 7, sec. 2, paragraph 47, westerly towards Bancroft, not exceeding 20 miles, in lieu of the subsidy granted by 1900, cap. 8, sec., 2 paragraph 3; also from the terminus of previously subsidized lines at a point about 40 miles west of Golden Lake, westerly to Bancroft, not exceeding 11 miles; in all not exceeding 31 miles.

522. For a line of railway from Chipman Station, New Brunswick, to Gibson, in lieu of the subsidies granted by 1897, cap. 4, and 1899, cap. 7, sec. 2, paragraph 31, not exceeding 45 miles.

523. To the Inverness and Richmond Railway Company, for a line of railway from a point at or near Point Tupper on the Intercolonial Railway, to Broad Cove and Cheticamp, Nova Scotia, in lieu of the subsidies granted by 1897, cap. 4, 1899, cap. 7, sec. 2, paragraph 29, and 1900, cap. 8, sec. 2, paragraph 27, not exceeding 98 miles.

524. For a line of railway from Caplin to Paspebiac, Quebec, in lieu of the subsidy granted by 1899, cap. 7, sec. 2, paragraph 15, the subsidy contract to be entered into with the trustees or receivers under mortgage from the Atlantic and Lake Superior Railway Company, and to contain the conditions that the subsidy when earned shall be paid in the following manner:—

1st. To the Hamilton Bridge Works Company in payment for bridge superstructures on the said section of railway, when furnished and erected by that company, not to exceed $35,000;

2nd. For the completion of the road-bed and works incidental thereto;

3rd. Towards payment of overdue balances, pro rata, in settlement of claims for labour, boarding-house claims, and material and supplies furnished in connection with the construction of the said section of railway; in all not exceeding 30 miles.

525. To the Schomberg and Aurora Railway Company, for a line of railway from a point on the Grand Trunk Railway between King and Newmarket, Ontario, to Schomberg, in lieu of the subsidy granted by 1897, cap. 4, not exceeding 15 miles.

526. To the Ottawa and Gatineau Railway Company, for a line of railway from the end of the 62nd mile subsidized, towards Désert, in lieu of the subsidy granted by 1897, cap. 4, sec. 2, paragraph 5, not exceeding 20 miles.

527. To the Restigouche and Western Railway Company, for its line of railway from Campbellton on the Intercolonial Railway, New Brunswick, towards Grand Falls, in lieu of the subsidy granted by 1897, cap. 4, sec. 2, paragraph 10, not exceeding 20 miles.

528. To the Pontiac Pacific Junction Railway Company, for 36 miles of its railway from a point at or near Shawville, crossing the Ottawa River via Calumet Island to Pembroke, including the bridging of both channels of the Ottawa River at Calumet Island, 14 miles of which shall be in lieu of the unexpended balance of subsidy granted by 1897, cap. 4, sec. 3, paragraph 2, not exceeding $115,200.

529. To the Manitoulin and North Shore Railway Company, for its line of railway, from a point on its line of railway between Sudbury and Little Current to its junction with the line of the Algoma Central and Hudson Bay Railway, at or

near Goulais River, in addition to and in further extension of its railway subsidized by 1900, cap. 8, sec. 2, paragraph 6, an additional mileage not exceeding 130 miles.

530. For a line of railway from Grandique Ferry, Nova Scotia, to Arichat, not exceeding 8 miles.

531. To the Central Ontario Railway Company, for a further extension of its line of railway, subsidized by 1900, cap. 8, sec. 2, paragraph 5, northward, to a junction with the Canada Atlantic Railway, at or near Whitney, Ontario, not exceeding 20 miles.

532. To the Kingston and Pembroke Railway Company, for a line of railway from a point at or near Sharbot Lake, Ontario, via Lanark, to Carelton Place, not exceeding 41 miles.

533. To the Norwood and Apsley Railway Company, for a line of railway from Norwood, Ontario, to the village of Apsley, not exceeding 30 miles.

534. For a line of railway from a point on the Dominion Atlantic Railway at or near Wolfville, Nova Scotia, to the Government pier on the Basin of Minas, not exceeding one mile.

535. To the Algoma Central and Hudson Bay Railway Company, for a line of railway from Sault Ste. Marie to a point on the Canadian Pacific Railway at or near White River, in the district of Algoma, in extension of the subsidy granted to the Algoma Central Railway by 1899, cap. 8, sec. 2, paragraph 23, and by 1900, cap. 8, sec. 2, paragraph 4, a further and additional mileage not exceeding 135 miles.

536. For a line of railway from Bridgetown, Nova Scotia, to Middleton, in extension of the line subsidized by 1900, cap. 8, sec. 2, paragraph 28, not exceeding 11 miles.

537. For a line of railway from a point on the Grand Trunk Railway at or near Burk's Falls, Ontario, to the Maganetawan River, not exceeding two miles.

538. For a line of railway between Halifax and the Central Railway, Nova Scotia, from the end of the 40th mile from Halifax, subsidized by 1900, cap. 8, sec. 2, paragraph 40, to a junction with the Central Railway, Nova Scotia, not exceeding 30 miles.

539. For a line of railway from a point on the Algoma branch of the Canadian Pacific Railway at or near Bruce Lake Station, northerly to a point at or near Rock Lake, in the district of Algoma, not exceeding 9 miles.

540. For a line of railway from Roberval, Quebec, westward towards James Bay, not exceeding 60 miles.

541. For a line of railway from a point upon the Stonewall branch or the Selkirk branch of the Canadian Pacific Railway to Icelandic River by way of Gimli, not exceeding 35 miles.

542. To the Restigouche and Western Railway Company, for an extension of its line of railway from the 50th mile from Campbellton already subsidized, westward, to effect a junction with its line of railway subsidized 27 miles east from the St. John River, not exceeding 33 miles.

543. For a line of railway from Duncan Lake towards Lardo or Arrow Lake, British Columbia, or from Lardo to Arrow Lake, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 21, not exceeding 30 miles.

3. The Governor in Council may grant to the Ottawa and Gatineau Railway, for its unearned balance of subsidy upon the 62 miles of its line of railway from Hull towards Désert, granted by 1897, chap. 4, sec. 3, paragraph 3, a sum not exceeding $35,872.

4. The subsidies hereby authorized, and any subsidies heretofore authorized under any Act of Parliament of Canada still in force but not fully paid, towards the construction of any railway or bridge, shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the

Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

(*a.*) upon the completion of the work subsidized; or

(*b.*) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or

(*c.*) upon progress estimates on the certificate of the Chief Engineer of Government Railways, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than sixty thousand dollars; or

(*d.*) with respect to (*b.*) and (*c.*), part one way, part the other.

5. The subsidy of 66 miles granted to the Manitoulin and North Shore Railway Company for a line of railway between Little Current, on Manitoulin Island, and Sudbury, Ontario, by paragraph 6 of section 2 of chapter 8 of the statutes of 1900, may be contracted for with the company and paid, and the work may be begun and prosecuted in two sections, the first beginning at or near Victoria Mines, in the township of Denison, and extending to Sudbury, and thence north-easterly towards Lake Wahnapitae, not exceeding 33 miles; the second section beginning at Little Current and extending to and connecting with the Canadian Pacific Railway at or near Stanley, in the township of Baldwin, on the Canadian Pacific Railway, not exceeding 31 miles; subject, however, to the company carrying out the undertakings contained in paragraph 6 of section 2 of chapter 8 of the statutes of 1900.

6. The subsidies hereinbefore authorized to be granted to companies named, shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1901, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed upon a location, and according to descriptions, conditions, and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make.

7. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements, and other rights, as will afford to all railways connecting with those so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized.

8. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the Government of Canada shall

be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

By the Act 3rd Edward VII., chap. 57 (assented to 24th October, 1903.)

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile :—

544. To the Tilsonburg, Lake Erie and Pacific Railway Company, for a line of railway from the present terminus at Ingersoll to Woodstock, not exceeding 9 miles, in lieu of the subsidy granted by item 26 of section 2 of chapter 7 of 1899.

545. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for a line of railway from Burketon to Bobcaygeon, not exceeding 40 miles, in lieu of the subsidy granted by item 11 of section 2 of chapter 7 of 1899.

546. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, not exceeding 51 miles, in lieu of the subsidy granted by item 6 of section 2 of chapter 7, 1901.

547. To the Central Ontario Railway, for a further extension of its railway from a point at or near Bancroft to a point on the Canada Atlantic Railway at or near Whitney, not exceeding 40 miles, in lieu of the subsidies granted by item 5 of section 2 of chapter 8 of 1900, and item 16 of section 2 of chapter 7 of 1901, respectively.

548. To the Strathroy and Western Counties Railway Company, for a line of railway from a point at Lambeth to Strathroy, via the villages of Delaware, Mount Brydges and Caradoc Station on the Canadian Pacific Railway, and from Strathroy northerly to Forest, Thedford or Parkhill, not exceeding in all 31 miles, in lieu of subsidies granted by item 4 of section 2 of chapter 7, 1899, and item 2 of section 2 of chapter 8 of 1900, respectively.

549. To the Montfort and Gatineau Colonization Railway Company, to extend its railway from Arundel to a point in the municipality of the united townships of Preston and Hartwell, not exceeding 30 miles, in lieu of the subsidy granted by item 31 of section 2 of chapter 8 of 1900.

550. For a line of railway from Jonquières to La Baie des Ha Ha, not exceeding 20 miles, in lieu of the subsidy of 12 miles granted by item 21 of section 2 of chapter 7 of 1899.

551. For a line of railway from Lime Ridge northerly through the county of Wolfe in the county of Megantic, not exceeding 50 miles, being a revote of the subsidy granted by chapter 4 of 1894.

552. For a line of railway from Joliette to or near Lake Manuan, a distance not exceeding 60 miles, being a revote and in lieu of subsidies granted by chapter 4 of 1897 and chapter 8 of 1900.

553. For a line of railway from St. Eustache to St. Placide in the county of Two Mountains, not to exceed 18 miles; from St. Eustache to Sault au Recollet, 12 miles; and from St. Placide to St. Andrews, 8 miles—not exceeding in all 38 miles; being a revote of subsidies granted by chapter 24 of 1887 and chapter 5 of 1892, respectively.

554. For a line of railway from Roberval westward towards James Bay, not exceeding 60 miles, in lieu of the subsidy granted by item 25 of section 2 of chapter 7 of 1901.

556. For a line of railway from Yamaska to Lotbinière, a distance not exceeding 70 miles, in lieu of the subsidy granted by item 27 of section 2 of chapter 7 of 1899.

557. To the Ottawa, Northern and Western Railway Company, for that portion of its line from a point at the east end of the Hull station yard of the Canadian Pacific Railway to a point of junction with the Interprovincial Bridge approach in the city of Hull, not exceeding one mile; and for a line of railway to the boundary line of the city of Hull from a point on the Ottawa and Gatineau Railway, now the Ottawa, Northern and Western Railway, not exceeding one-quarter of a mile; in lieu of any balance of mileage subsidized by items 12 and 39 respectively of section 2 of chapter 7 of 1899.

558. To the International Railway Company of New Brunswick (formerly the Restigouche and Western Railway Company), for a line of railway from the western end of the ten miles of its railway, as already constructed from Campbellton towards a point on the St. John River between Grand Falls and Edmundston, not exceeding 67 miles, being a revote, and in lieu of subsidies granted by chapter 4 of 1897, item 42 of section 2 of chapter 7 of 1899, and item 22 of section 2 of chapter 8 of 1900.

559. For a line of railway from Woodstock to the International Boundary, not exceeding 26 miles, being a revote of the subsidy granted by chapter 4 of 1894.

560. To the St. John Valley Railway Company, for a line of railway from a point on the Canadian Pacific Railway at or near Welsford or Westfield, or between the said two points, to Gagetown, not exceeding 30 miles, being a revote of the subsidy granted by chapter 4 of 1897.

561. To the Shediac and Coast Railway Company, for a line of railway from Shediac to Shemogue and towards Cape Tormentine, in Westmoreland County, not exceeding 38 miles, in lieu of the subsidy granted by item 25 of section 2 of chapter 8 of 1900.

562. To the Mabou and Gulf Railway Company, Limited, for a line of railway from Mabou Coal Mines to a point at or near Glendyer, thence to Orangedale on the Intercolonial Railway, not exceeding 34 miles, a revote of the subsidy granted by chapter 4 of 1894, and in substitution of the 25 miles subsidized thereby from Orangedale to Broad Cove.

563. To the Nova Scotia Eastern Railway Company, Limited, for a line of railway from New Glasgow to Cross Roads, Country Harbour, thence to the town of Guysborough, and thence to the Strait of Canso; with a branch from Cross Roads, Country Harbour, aforesaid, down the Country Harbour River to the Deep Waters thereof, not exceeding 116 miles; in lieu of subsidies for 40 and 80 miles granted by items 4 and 1, respectively, of section 2 of chapter 7 of 1901.

564. For a line of railway from Debert Station on the Intercolonial Railway to Debert Coal Mine, not exceeding 4½ miles, in lieu of the subsidy granted by item 29 of section 2 of chapter 8 of 1900.

565. For a line of railway from a point on the Joggins Railway near River Hebert Railway Bridge to the village of Minudie, not exceeding 6 miles, being a revote and in substitution of subsidy granted by chapter 4 of 1894.

566. To the Middleton and Victoria Beach Railway Company, Limited, for a line of railway from Victoria Beach to Middleton, not exceeding 41 miles, in lieu of subsidies granted by item 28 of section 2 of chapter 8 of 1900, and by item 21 of section 2 of chapter 7 of 1901.

567. To the Halifax and South-western Railway Company, for the following lines of railway:—

(*a.*) A line of railway from a point at or near Halifax to a point on the Central Railway at or near Mahone Bay, not exceeding 68 miles.

(*b.*) A line of railway from a point on the Central Railway at or near Bridgewater towards Barrington Passage, not exceeding 77 miles.

(*c.*) A line of railway from a point at or near New Germany on the Central Railway to a point at or near Caledonia, not exceeding 22 miles.

(*d.*) A line of railway from a point at or near Caledonia to Liverpool, not exceeding 29 miles.

The subsidies to the said lines of railway being granted in lieu of subsidies granted by items 17, 18, 35 and 36 of section 2 of chapter 7, 1899 by items 26 and 40 of section 2 of chapter 8 of 1900, and items 5 and 23 of section 2 of chapter 7 of 1901, respectivley.

568. To the Inverness Railway and Coal Company, formerly the Inverness and Richmond Railway Company, Limited, for 8 miles of railway between Point Tupper and Broad Cove; and for a line of railway not exceeding 37 miles, from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, being a revote and in substitution of the subsidy granted by chapter 4 of 1897.

569. For a line of railway from a point at or near Wolfville on the Dominion Atlantic Railway to the Government pier on the Basin of Minas, not exceeding one mile, in lieu of the subsidy granted by item 19 of section 2 of chapter 7 of 1901.

570. To the Nicola, Kamloops and Similkameen Coal and Railway Company, for a line of railway from a point at or near Spence's Bridge on the Canadian Pacific Railway to Nicola Lake, not exceeding 45 miles, being a revote of subsidies granted by chapter 5 of 1892 and chapter 4 of 1894.

571. For a line of railway from Winnipeg Beach or Teulon to a point on Icelandic River, by way of Gimli, not exceeding 35 miles, in lieu of the subsidy granted by item 26 of section 2 of chapter 7 of 1901.

572. To the Edmonton, Yukon and Pacific Railway Company, for a line of railway from the town of Strathcona to Edmonton, and thence westerly towards the Yellow Head Pass, a distance not exceeding 50 miles, in lieu of the subsidy granted by item 41 of section 2 of chapter 7 of 1899.

573. To the St. John Valley and Rivière du Loup Railway Company, for a line of railway from Fredericton to Woodstock, not exceeding 59 miles, in lieu of the subsidy granted by item 5 of section 2 of chapter 7 of 1899.

574. For a line of railway from Hawkesbury, Ontario, to South Indian, not exceeding 35 miles, in lieu of the subsidy granted by item 22 of section 2 of chapter 7 of 1899.

575. To the Tilsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Woodstock northerly to a point on the Grand Trunk Railway at Berlin, or from Ingersoll to Stratford, or to any point on the Grand Trunk Railway between these places, not exceeding 35 miles, being in addition to and continuation of the 9 miles mentioned in item 1 of this section (544).

576. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the present terminus of its railway, near Baptiste, easterly to a point at or near Renfrew, not exceeding 75 miles.

577. To the Nepigon Railway Company, for a line of railway from Lake Superior to Lake Nepigon, and from a point on the north shore of Lake Nepigon northerly, not exceeding 80 miles.

578. To the Manitoulin and North Shore Railway Company, for a line of railway from Little Current on its present line, to Sudbury, and thence towards the main line of the Canadian Pacific Railway Company, not exceeding 30 miles, in lieu of the subsidy for 21 miles granted by item 38 of section 2 of chapter 7 of 1899.

579. To the Thunder Bay, Nepigon and St. Joe Railway Company, for a line of railway from Port Arthur north-easterly, not exceeding 50 miles.

580. To the Timagami Railway Company, for a line of railway from a point at or near Sturgeon Falls in a north-westerly direction to a point on the westerly shore of Lake Timagami in the district of Nipissing, not exceeding 50 miles.

581. To the Bay of Quinté Railway Company, for further extension of its line of railway, from the northern terminus thereof, commencing from a point at or near Actinolite, thence in a north-westerly direction, via the villages of Queensboro' and Bannockburn, to a point in the township of Marmora or Lake in Hastings County, not exceeding 20 miles in all.

582. To the Bruce Mines and Algoma Railway Company, for 21 miles from the end of its line, as subsidized by chapter 7 of 1901, northward, not exceeding 21 miles.

583. To the James Bay Railway Company, for a line of railway from Toronto, via the east side of Lake Simcoe, to a point at, near, or beyond Sudbury, through Parry Sound, not exceeding 265 miles, in lieu of two subsidies granted by chapter 8 of 1900, for 35 and 20 miles, respectively, from Parry Sound towards James Bay.

584. To the Quebec and Lake St. John Railway Company, for one mile of railway from Roberval to the Government wharf at Lake St. John.

585. To the Montfort and Gatineau Colonization Railway Company, for the extension of its line of railway from Morin Flats to St. Jerome, to connect with the Great Northern Railway, not exceeding 22 miles.

586. To the Interprovincial and James Bay Railway Company, for a line of railway from Lake Timiskaming at the present terminus of the Canadian Pacific Railway line, in a northerly direction, not to exceed 50 miles.

587. For a line of railway from Waltham Station to Ferguson Point, in the county of Pontiac, not exceeding 20 miles.

588. For a line of railway from Lake Nominingue to Le Lièvre, not exceeding 35 miles.

589. For a line of railway in extension of the line from Lime Ridge into the county of Megantic to the bridge over the St. Lawrence at or near Quebec, not exceeding 30 miles.

590. To the Quebec Central Railway Company, for an extension of its line of railway from St. François to St. George, not exceeding 9 miles; also for a railway from Scott Junction to the Quebec bridge, not exceeding 22 miles.

591. For a line of railway from the station of Lac Bouchette on the Quebec and Lake St. John Railway to St. Andre, not exceeding 13 miles.

592. For a line of railway from Quebec towards Seven Islands, including branches to Murray Bay and Baie St. Paul, not exceeding 200 miles.

593. For a branch line from a point at or near the intersection of the Canadian Pacific Railway and the Great Northern Railway between St. Philippe d'Argenteuil and Lachute, thence in a northerly direction, passing through the village of Brownsburg, not exceeding 3 miles.

594. To the Orford Mountain Railway Company, for a line of railway from a point on its main line between Lawrenceville and Eastman to Lake Bonella, 5 miles; from Kingsbury to Windsor Mills, 10 miles; and from Eastman to the town line between the township of Bolton, east part, and the township of Potton, 12 miles—not exceeding in the whole 27 miles.

595. To the Atlantic, Quebec and Western Railway Company, for a line of railway from Gaspe to a point at or near Causapscal on the Intercolonial Railway, and from that point to Edmundston, not exceeding 250 miles; and for a line of railway from Paspebiac to Gaspé as near the shore as practicable, not exceeding 102 miles.

596. For a line of railway, in addition to and in extension of the line mentioned in item 11 (354) of this section, from Roberval towards James Bay, not exceeding 40 miles.

597. For a branch line from a point near the bridge at Trois Pistoles River on the Intercolonial Railway in a south-easterly direction to Mackenzie and Rencuf Falls, on the Trois Pistoles River, not exceeding 21 miles.

598. To the Matane and Gaspe Railway Company, for a line of railway from a point at or near St. Octave on the Intercolonial Railway to Matane, not exceeding 30 miles.

599. To the Chateauguay and Northern Railway Company, for a line of railway from a point on its main line at or near L'Epiphanie, passing by way of the parish of St. Jacques de l'Achigan to the village of Rawdon, not exceeding 16 miles.

600. For a line of railway from the line of the Montreal and Atlantic Railway Company at St. Guillaume to the River Yamaska to join with the South Shore Railway, a distance not exceeding 12 miles.

601. For aline of railway from La Tuque on the St Maurice River to a point on the Lake St. John Railway near the River Jeannotte, not exceeding 35 miles.

602. To the Montreal Northern Railway Company, for a line of railway from a point at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lakes St. Joseph and Ste. Marie, in a southerly direction, a distance not exceeding 15 miles.

603. To the International Railway Company of New Brunswick, for a line of railway, in addition to and in extension of the line of 67 miles mentioned in item 14 of this section, to a point on the St. John River between Grand Falls and Edmundston, not exceeding 33 miles.

604. To the Beersville Coal and Railway Company, for a line of railway from Adamsville on the Intercolonial Railway to a point at or near Brown's Landing or Beersville, not exceeding 7 miles.

605. To the York and Carleton Railway Company, for a line of railway from its present terminus westerly, not exceeding 5 miles.

606. To the Mabou and Gulf Railway Company, Limited, for a line of railway from a point on the Intercolonial Railway at or near Mines Road Station to the wharf at Caribou Cove, not exceeding 4 miles, being in addition to subsidy mentioned in item 18 (562) of this section.

607. To the Nova Scotia Eastern Railway Company, Limited, for a line of railway from Dartmouth through the Musquodoboit Valley to a point at or near Melrose to connect there with the railway mentioned in item 19 (563) of this section, not exceeding 120 miles.

608. To the Midland Railway Company, Limited, for a line of railway from Truro northerly towards Brule, not exceeding 34 miles.

609. For a line of railway from St. Peters to Louisburg, not exceeding 50 miles.

610. To the Kootenay Central Railway Company, for a line of railway from Golden to the International Boundary Line, via Windermere and Fort Steele, and crossing the Crow's Nest Railway at or near Elko, not exceeding 186 miles.

611. To the Kettle River Valley Railway Company, for a line of railway from Grand Forks to a point 50 miles up the North Fork and West Fork of the North Fork of Kettle River, not exceeding 50 miles.

612. For a line of railway from Wellington to Union Bay, not exceeding 55 miles.

613. For a line of railway from Midway to Vernon, not exceeding 150 miles.

614. To the St. Mary's River Railway Company, for a line of railway from Spring Coulee, crossing St. Mary's River to Cardston, 16 miles, and from a point on this line to or near the intake of the irrigation canal, about 16 miles, in all not exceeding 32 miles.

615. For a line of railway from Dawson to Stewart River, passing at or near Grand Forks, not exceeding 84 miles.

616. To the Canadian Pacific Railway Company, for a branch line from a point on the main line between Moosomin and Elkhorn, north-westerly to a point in the neighbourhood of the Pheasant Hills, not exceeding 136 miles.

617. For a line of railway from a point at or near Medicine Hat on the Canadian Pacific Railway to the coal fields in or near townships 12 and 13, range 6, west of the fourth principal meridian, not exceeding 8 miles.

618. To the Great Northern Railway of Canada, for a line of railway from Garneau Junction to the Quebec bridge, not exceeding 70 miles.

619. To the Halifax and South-western Railway Company, for a line of railway to Barrington Passage, in addition to and in continuation of the 77 miles mentioned in paragraph *(b)* of item 23 (567) of this section, not exceeding 35 miles.

620. To the Lake Superior, Long Lake and Albany Railway Company, for a line of railway from Peninsula Harbour in a northerly direction, not exceeding 10 miles.

621. To the Cumberland Railway and Coal Company, for a line of railway from Parrsboro' Station to Riverside Wharf, not exceeding 1 mile.

622. To the Indian River Railway Company, for a line of railway from a point at or near the north end of Lake Megantic, thence southerly along the said lake to a point on the International Boundary, not exceeding 19 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction of the bridges also hereinafter mentioned, that is to say :—

623. Towards the construction and completion of a railway bridge and approaches over the Nicolet River at Nicolet, in lieu of the grant under item 39 of section 2 of chapter 8 of 1900, $15,000.

624. Towards the construction of the steel superstructure of a railway bridge on the St. Francis River, in the county of Yamaska, in lieu of the grant under item 38 of section 2 of chapter 8 of 1900, but subject to the same conditions as expressed therein, payable to the Canadian Bridge Company of Walkerville, as their claim may appear for work already done on the said bridge, $50,000.

625. To the Canadian Bridge Company of Walkerville. to strengthen and complete the foundation and approaches to the bridge over the St. Francis River subsidized in favour of the South Shore Railway Company by section 3 of chapter 7 of 1899, $35,000, which amount shall remain the first charge on the road, and shall be recouped to the Treasury out of subsidies earned or to be earned, $35,000.

626. To the Chateauguay and Northern Railway Company, in addition to the subsidy for the Bout de l'Ile bridge granted by item 33 of section 2 of chapter 8 of 1900, $50,000.

4. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :—

(*a.*) upon the completon of the work subsidized ; or

(*b.*) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or

(*c.*) upon the progress estimates on the certificate of the Chief Engineer of the Department of Railways and Canals, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars ; or

(*d.*) with respect to (*b*) and (*c*), part one way, part the other.

5. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges respectively ; all the lines and bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1903, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights, as will afford to all railways connecting with the railways and bridges so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways ; and the Governor in Council shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized.

7. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the line in respect of which it has received such subsidy, and whenever required, shall furnish mail cars properly equipped for such mail service ; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Governor in

Council; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

8. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

9. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be judge.

By Special Act 4 Edward VII Chap. 34, 1904.

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway,

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile :—

627. To the Bracebridge and Trading Lake Railway Company, for a railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, in lieu of the subsidy granted by item 7 of section 2 of chapter 8 of 1900, not exceeding 15 miles.

628. To the Bruce Mines and Algoma Railway Company, for the following lines of railway :—

(*a.*) For that portion of its line of railway from Bruce Mines Junction southerly to the town of Bruce Mines, on Lake Huron, a distance not exceeding 3 miles;

(*b.*) For the 6 miles of railway constructed from Gordon Lake Station, being the end of its line as subsidized by chapter 7 of 1901, northward to Rock Lake, a distance of 6 miles;

(*c.*) For 12 miles from Rock Lake northward, a distance not exceeding 12 miles;

The subsidies to the said lines being granted in lieu of the subsidy granted by item 38 of section 2 of chapter 57 of 1903, not exceeding 21 miles.

629. To the Nepigon Railway Company, for the following lines of railway :—

(*a*.) From a point at or near Nepigon Station on the line of the Canadian Pacific Railway to Nepigon Lake, not exceeding 30 miles ;

(*b*.) From a point on Nepigon Bay of Lake Superior to a point on the west of Lake Helen on the line of the Nepigon Railway, not exceeding 3½ miles ;

(*c*.) From a point on the line of the Nepigon Railway at or near the crossing of the Fraser River, to a point on Lake Jesse, by way of Cameron's Falls, not exceeding 1½ mile ;

(*d*.) From a point on the north shore of Lake Nepigon northerly, not exceeding 45 miles ;

The subsidies to the said lines being granted in lieu of the subsidy granted by item 33 of section 2 of chapter 57 of 1903, not exceeding 80 miles.

630. For the construction of a branch line of railway beginning at the Canadian Pacific Railway Company's main line at St. Philippe d'Argenteuil Station, or at a point between there and Grenville, thence in a northerly direction, in lieu of the subsidy granted by item 49 section 2 of chapter 57 of 1903, not exceeding 3 miles.

631. To the Chateauguay and Northern Railway, for a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway in or near the Town of Joliette, passing at or near the Town of L'Assomption, Quebec, together with a spur line into the said town, in lieu of the subsidy granted by item 32 of section 2 of chapter 8 of 1900, not exceeding 42 miles.

632. To the Great Northern Railway Company of Canada, to enable it to extend its railway from Arundel to a point in the municipality of the united Townships of Preston and Hartwell, Province of Quebec, in lieu of the subsidy granted to the Montford and Gatineau Colonization Railway by item 6 of section 2 of chapter 57 of 1903, not exceeding 30 miles.

633. To the Chateauguay and Northern Railway Company, for a branch line from a point on its main line at or near Charlemagne, thence northerly and westerly to a point on the Montford and Gatineau Railway at or near Morin Flats, in lieu of the Subsidy granted to the Montford and Gatineau Colonization Railway by item 41 of section 2 of chaptar 57 of 1903, not exceeding 22 miles.

634. To the Ottawa River Railway Company, for a line of Railway from a point at or near St. Agathe des Monts Station towards the Township of Howard in the County of Argenteuil , passing near Lakes St. Joseph and St. Marie, in a southerly direction, in lieu of the subsidy granted to the Montreal Northern Railway Company by item 58 of section 2 of chapter 57 or 1903, not exceeding 15 miles.

635. To the Ottawa River Railway Company, for a line of railway between a point in the Parish of St. Andrews, in the County of Argenteuil, and a point in the Parish of St. Lawrence, in the County of Jacques Cartier, passing through the Parishes of St. Placide, St. Eustache and St. Martin, in lieu of the subsidy granted by item 10 of section 2 of chapter 57 of 1903, not exceeding 38 miles.

636. For a line of railway from Lardo towards Upper Arrow Lake, British Columbia, in lieu of the subsidy granted by item 28 of section 2 of chapter 7 of 1901, not exceeding 30 miles.

637. To the Western Alberta Railway Company, from a point on the United States boundary, west of range 27, northwesterly towards Anthracite, in the district of Alberta, in lieu of the subsidy granted by item 40 of section 2 of chapter 7 of 1899, not exceeding 50 miles.

3. The Governor in Council may grant the subsidy hereinafter mentioned towards the construction of the bridge also hereinafter mentioned, that is to say :—

638. To the Chateauguay and Northern Railway Company, the balance remaining unpaid of the subsidy granted by item 33 of section 2 of chapter 8 of 1900, for a single-track standard railway bridge, with two roadways 10 feet wide, for free vehicular traffic, the same as upon a public highway, from Bout de L'Ile to Charlemagne at the Junction of the Ottawa and St. Lawrence Rivers, a sum not exceeding $51,000.

4. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :—

(a.) Upon the completion of the work subsidized ; or

(b.) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or

(*c.*) Upon the progress estimates on the certificate of the Chief Engineer of the Department of Railways and Canals, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars ; or

(*d.*) With respect to (*b*) and (*c*), part one way, part the other.

5. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1904, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights, as will afford to all railways connecting with the railways and bridge so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways ; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and the bridge hereby subsidized. Provided always that any decision of the said Board made under this section may be at any time varied, changed, or rescinded by the Governor in Council as he deems just and proper.

7. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transpor-

tation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service ; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed, and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada ; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

8. As respects all railways and the bridge for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

9. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

10. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the Chief Engineer of Government Railways, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the Chief Engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of $3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said $3,200 per mile, if any : and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Chief Engineer, entitles the company thereto : Provided always—

(*a*.) that the estimated cost, so certified, is not less on the average than $18,000 per mile for the whole mileage subsidized :

(*b*.) that no payment shall be made except upon a certificate of the Chief Engineer that the work done is up to the standard specified in the company's contract :

(*c*.) that in no case shall the subsidy exceed the sum of $6,400 per mile.

1. Whenever a contract has been duly entered into with a company for the construction of any line of railway subsidized by either of the Acts mentioned in the preamble, the Minister of Railways and Canals, at the request of the Company and upon the report of the chief engineer of government railways, and his certificate that he has made careful examination of the surveys, plans and profiles of the whole line so contracted for and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the probable and reasonable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer,

and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of $3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said $3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the chief engineer, entitles the company thereto: Provided always—

(*a.*) that the estimated cost, so certified, is not less on the average than eighteen thousand dollars per mile for the whole mileage subsidized;

(*b.*) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the Company's contract;

(*c.*) that in no case shall the subsidy exceed the sum of six thousand four hundred dollars per mile.

2. In construing this Act the word "cost" shall have the meaning assigned to it by the Act authorizing the granting of the subsidy.

PART IV

MISCELLANEOUS STATEMENTS

No.

SUBSIDY AGREEMENTS for the Construction of Railways

No. of Contract.	Date of Signature.	Name of Railway.	Line of Railway to be Constructed.	Authority for Execution.	
				Act of Parliament.	Order in Council.
15303	Jan. 23, 1904	Bay of Quinté Ry. Co.	Extension of railway from point near Actinolite to a point in tp. of Marmora, Hastings Co.	Can. 1903, c. 57.	Dec. 24, 1903.
15519	June 24, 1904	Beersville Coal & Railway Co.	From Adamsville to point near Brown's Landing or Beersville.	Can. 1903, c. 57.	April 26, 1904.
15163	July 29, 1903	Canadian Northern Ry. Co.	From Grand View to Edmonton, 620 miles, and Prince Albert branch, 100 miles east from Prince Albert.	3 Edw. VII, c. 7.	Aug. 1, 1903.
15272	Dec. 12, 1903	Chateauguay and Northern.	From pt. on main line near L'Epiphanie to village of Rawdon.	3 Edw. VII, c. 57.	Nov. 28, 1903.
15280	" 7, 1903	Canadian Northern Ry. Co.	From point on line of Winnipeg Great Northern Ry., north of Swan River to Prince Albert, N.W.T.	1899, c. 7.	Nov. 4 and 26, 1903.
15281	" 7, 1903	Canadian Northern Ry. Co.	In further extension north of Swan River towards Prince Albert, N.W.T.	1900, c. 8.	Nov. 4 and 26, 1903.
15283	" 21, 1903	Canadian Bridge Co. *et al.*	St. Francis River bridge.	1903, c. 57.	Nov. 12, 1903.
15284	" 21, 1903	Canadian Bridge Co. *et al.*	For completion of foundation and approaches of St. Francis River bridge.	1903, c. 57.	Nov. 14, 1903.
15286	" 26, 1903	Central Counties Ry. Co.	From Hawkesbury, Ont., to South Indian.	1903, c. 57.	Dec. 12, 1903.
15300	Jan. 14, 1904	Canadian Pacific Ry. Co.	From point on main line between Moosomin and Elkhorn, northwesterly to point in neighbourhood of Pheasant Hills.	1903, c. 57.	Nov. 17, 1903. Jan. 12, 1904.
15520	June 24, 1904	Edmonton, Yukon & Pacific Ry. Co.	From Strathcona to Edmonton, &c.	Can. 1903, c. 57.	Mch. 10, 1904. June 13, 1904.
15164	July 29, 1903	Grand Trunk Pacific Railway Co.	From Winnipeg to Port Simpson (W. Div.) and providing for construction by Govt. of E. Div. from Winnipeg to Moncton; to be leased to the Co.		July 30, 1903.
15432	Feb. 18, 1904	Grand Trunk Pacific Railway Co.	Varying agreement, No. 15164.		
15244	Nov. 9, 1903	Halifax & S. Western Railway Co.	From Halifax to Malone Bay.	Can., 1903, c. 57.	Nov. 4, 1903.
15245	" 9, 1903	" "	From Bridgewater toward Barrington Passage; also a line to Barrington Passage in addition.	Can., 1903, c. 57.	Nov. 4, 1903.
15246	" 9, 1903	" "	From New Germany to Caledonia	Can., 1903, c. 57.	Nov. 4, 1903.
15247	" 9, 1903	" "	From Caledonia to Liverpool.	Can., 1903, c. 57.	Nov. 4, 1903.
15248	" 9, 1903	Inverness Railway & Coal Co.	From Cheticamp to point between Broad Cove and Point Tupper.	Can., 1903, c. 57.	Nov. 4, 1903.
15249	" 9, 1903	" "	From Point Tupper to Broad Cove.	Can., 1903, c. 57.	Nov. 4, 1903.

1.

entered into during the Fiscal Year ended June 30, 1904.

Amount of Subsidy.		Number of Miles Subsidized.	Maximum Grade. Feet per Mile.	Radius of Curvature Not less than.	Width of Clearing Each Side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per Linear Yard.	Date for Completion.
Per Mile.	Not exceeding.								
$	$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400 p. mile.	20	74	955	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	7	79.2	573	50	20	15	56	Jan. 1, 1905.
Guarantee of principal and interest of Co.'s securities to the extent of $13,000 per mile.		720	53	955	50	20	14	56	Oct. 1, 1905.
3,200	6,400 p. mile.	16	53	1,433	50	20	15	56	Oct. 31, 1904.
3,200	6,400 "	100	53	955	50	20	14	56	Aug. 1, 1904.
3,200	6,400 "	100	53	955	50	20	14	56	Aug. 1, 1904.
.....	50,000 "	.....	.....	.....	.....	.....	.....	.....	
....	35,000 "	.....	.....	.....	.....	.....	.....	.....	
3,200	6,400 "	35	52·80	1,433	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	136	52·80	1,433	50	20	14	56	Oct. 31, 1905.
3,200	6,400 "	50	52·8	955	50	20	15	56	Dec. 1, 1906.
Guarantee of bonds to extent of $13,000 per mile on prairie section and of $30,000 per mile on Mountain section.									
3,200	6,400 p. mile.	68	80	717	50	20	15	56	Aug. 1, 1895.
3,200	6,400 "	77·35	80	495 & 764·49	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	22	80	764·49	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	29	80	64·49	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	37	80	955	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	8	80	955	50	20	15	56	Aug. 1, 1905.

Subsidy Agreements for the Construction of Railways

Number of Contract.	Date of Signature.	Name of Railway.	Line of Railway to be Constructed.	Authority for Execution.	
				Act of Parliament.	Order in Council.
15301	Jan. 15, 1904	International Ry. Co. of N.B.	From west end of its 10 miles towards point on St. John Riv., between Grand Falls and Edmundston.	Cancelled by agreement.	Jan. 13, 1904.
15415	Mch. 14, 1904	Lindsay, Bobcaygeon & Pontypool.	Between Burketon and Bobcaygeon.	Can., 1903, c. 57.	Feb. 19, 1904.
15316	Dec. 28, 1903	Middleton & Victoria Beach.	From Victoria Beach to Middleton.	Can., 1903, c. 57.	Nov. 4, 1903.
15417	Apl. 15, 1904	Nova Scotia, Eastern	(1). New Glasgow to Cross Roads, 116 miles. (2). Dartmouth to Melrose through Musquodoboit Valley, 120 miles.	Can., 1903, c. 57.	Nov. 4, 1903, & Mch. 23, 1904
15039	July 10, 1903	Ottawa, Northern & Western Ry. Co.	From Aylmer to Hull, Quebec.	62-3 Vic., c. 7.	Dec. 5, 1902.
15177	Aug. 25, 1903	" "	From end of 62nd Mile toward Desert.	1 Edw. VII, c. 7.	Feb. 3, 1903.
15178	" 25, 1903	" "	Unearned balance of subsidy upon the 62 miles from Hull towards Desert, 1897, c. 4., sec. 3, Par. 3	1 Edw. VII, c. 7.	Feb. 3, 1903.
15234	Oct. 19, 1903	Quebec Bridge & Ry Co.	Quebec Bridge, approaches and terminals.		
15338	Feb. 17, 1904	Restigouche & Western Ry. Co.	From Campbellton on I. C. Ry., N.B., towards Grand Falls.	Can., 1901, c. 7.	Feb. 12, 1904.
15283	Dec. 21, 1903	South Shore Ry. Co. *et al.*	St. Francis River Bridge.	Can., 1903, c. 7.	Nov. 12, 1903.
15284	" 21, 1903	" "	For completion of foundation and approaches of St. Francis River Bridge.	Can., 1903, c. 57.	Nov. 12, 1903.
15386	Mch. 14, 1904	St. Mary's River.	From Spring Coulee to Cardston, 16 miles, and from point on this line near intake of Irrigation Canal, 16 miles.	Can., 1903, c. 57.	Nov. 26, 1903 & Jan. 21, 1904

Department of Railways and Canals,
Ottawa, November 8, 1904

entered into during the Fiscal Year ending June 30, 1904—*Continued.*

Amount of Subsidy.		Number of Miles Subsidized.	Maximum Grade. Feet per Mile.	Radius of Curvature not less than.	Width of Clearing each side.	Width of Cutting.	Embankment.	Steel Rails, lbs., per Lineal Yard.	Date for Completion.
Per Mile.	Not exceeding.								
$	$	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400 "	67	52·80	955	50	20	15	56	Dec. 31, 1904.
3,200	6,400 "	40	52·80	1,433	50	20	15	56	Jan. 1, 1905.
3,200	6,400 "	41	63·36	955	50	20	15	56	Aug. 1, 1905.
3,200	6,400 "	236	80	955	50	20	15	56	Dec. 31, 1906.
3,200	6,400 "	9	80	717·574	50	20	15	56	Jan. 31, 1903.
3,200	6,400 "	20	89	573	50	20	15	56	Jan. 1, 1904.
	35,872 "	0	105·6	573	50	20	15	56	Jan. 1, 1904.
Guarantee of principal and interest of securities of the Co. to the extent of $6,678,200.									Dec. 1, 1906.
3,200	6,400 p. mile.	20	80	819	50	20	15	56	Dec. 1, 1904.
	50,000 "								
	35,000 "								
3,200	3,200 "	32	52·8	819	50	18	10	35	Aug. 1, 1905.

HAZEN HANSARD,
Law Clerk

No. 2.

CONTRACTS entered into during the Fiscal Year ended June 30, 1904.

1.—INTERCOLONIAL RAILWAY.

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1903.		
15149	July 21	Rhodes, Curry & Co., Ltd.	Extension of freight car shop, Moncton.
15158	" 23	Dominion Bridge Co	Foot bridge and umbrella roofs at Levis.
15159	" 25	Reid & Archibald	Widen roadbed for double track between Richmond and Rockingham, N.S.
15171	Aug. 11	Rhodes, Curry & Co., Ltd.	Delivered two baggage cars.
15174	" 15	The Pintsch Compressing Co.	Furnish and erect apparatus to manufacture oil gas at Moncton, N.B.
15197	Sept. 10	J. B. McManus	Repair crib work, Courtney Bay branch.
15227	July 31	Rhodes, Curry & Co., Ltd.	Supply 2,250 33 in. car wheels.
15229	" 31	John McDougall Co.	" " "
15236	Oct. 26	The Canada Coals & Ry. Co.	Exchange of engines *re* collision at Maccan Station.
15243	" 30	Canadian Locomotive Co., Ltd.	Varying contract number 14,546.
15252	Nov. 4	Tilman D. LeBlanc	Building for express rooms, &c., Moncton.
15253	" 11	Willard Kitchen	" baggage rooms, &c., Lévis.
15269	Dec. 1	E. A. Wallberg	Heating Chaudière Junction engine house, brick.
15274	" 1	Emile Dubé	Twelve stall engine house at Ste. Flavie, Que.
15276	Nov. 20	Dominion Bridge Co	Erect forty span bridges.
15288	Dec. 22	Honoré Huard	Erect station, &c., on River Ouelle branch.
15293	" 22	Emile Dubé	Erect engine house at Riviere du Loup.
15306	" 22	Joseph Gosselin	" " " River Ouelle Station.
	1904.		
15317	Jan. 6	City of St. John	To make about eight feet of track on corporation pier, St. John, N.B.
15329	Feb. 6	George St. Pierre & Co.	Erect buildings at Moose Park, Forestdale and Aston Junction, Que.
15360	" 6	Cloutier & Gaudreau	Freight sheds, &c., at Elgin Road, L'Anse à Giles and Trois Saumons, Que.
15387	Mch. 17	Dominion Bridge Co., Ltd	Three steel roof trusses for boiler house at Moncton.
15393	" 14	Rhodes, Curry & Co., Ltd.	Station at Rockingham, N.S.
15398	Feb. 29	" " " "	Extension to freight shed at Amherst.
15399	" 16	" " " "	2,000 car wheels.
15405	Apl. 7	Dominion Express Co.	Express freight business between St. John and Halifax, &c.
15410	Mch. 30	Beazley Bros.	Dredging at Halifax, N.S.
15452	May 3	W. A. MacKay & Co	Electric light plants, Mulgrave and Pt. Tupper.
15456	" 6	Cloutier & Gaudreau	Station and freight shed at Ste. Rosalie, Que.
15457	Apl. 29	Willard Kitchen	Car repair shop at Stellarton, N.S.
15458	" 25	Florido Bruneau	Freight shed and platform at Daveluyville, Que.
15461	" 15	John Hadley	Improvements to station at Petit Roche, N.B.
15463	" 21	F. L. Dixon	Car repair shop at Sydney.
15464	" 29	Canadian General Electric Co., Ltd	Electric plant at Halifax.
15467	April 15	Jas. Falconer & N. S. Faulkner.	Extension to station at Eureka, N.S.
15469	" 25	Tilman D. LeBlanc.	Extension to freight shed, &c., Painsec Jct.
15470	" 15	J. E. Falconer & N. S. Faulkner.	Shed for wrecking crane at Stellarton, N.S.
15472	" 25	Wilfrid Marchand	Freight shed and platform at St. Pacôme, Que.
15473	May 3	Willard Kitchen	Engine house at Sussex, N.B.
15475	June 1	Canadian Electric Light Co., Ltd.	Electric lighting at Lévis, &c., and electric power.
15488	May 6	Allan Gillis.	Addition to station at Pomquet.
15487	" 17	"	" " Harbour au Bouche.
15491	June 9	J. Arthur Matte	Enlarge station and erect freight shed at Rimouski, Que.
15492	May 17	Thomas A. Barnhill	Addition to station at Springhill Jct.
15493	" 17	M. McMillan	Extension to freight shed at North Sydney.
15495	" 31	C. J. Silliker.	Addition to freight shed at Nappan, N.S.
15496	" 23	Reid McManus.	Double tracking between Bedford Bridge and Windsor Junction.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended June 30, 1904—*Continued.*

1.—INTERCOLONIAL RAILWAY—*Concluded.*

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1904.		
15504	June 10	J. Arthur Matte	Station and drain at Kempt.
15505	" 24	Joseph Gosselin	Machine shop, &c., at Chaudière Jct., Que.
15512	April 26	City of Halifax	Water at Richmond, &c., Halifax, N.S.
15517	June 10	Robb Engineering Co., Ltd.	Heating plant at Lévis, Que.
15521	" 24	Rhodes Curry Co., Ltd	7 baggage cars.
15541	May 31	Zephirin Gagnon	Extension to station, &c., at St. Michel.
15555	June 15	Simon Benoit	Improvements to station at Tracadie, N.S.
15558	" 15	Willard Kitchen	Extend I.C.R. at Pictou Landing.
15586	" 8	Honoré Huard	Combined station and dwelling at Amqui.
15588	" 24	La Cie d'Aqueduc de (St. Pierre) Montmagny.	Supply water at St. Pierre.
15590	" 7	Canadian Loco. Co., Ltd	Deliver 25 Simple Consol. Locos.

2.—PRINCE EDWARD ISLAND RAILWAY.

	1903		
15213	Sept. 29	Can. Loco. Co., Ltd.	4 narrow gauge locomotives.
15292	Dec. 26	Hugh McDonald	Transportation of 12 spans and erection of 11 spans. Hillsboro Bridge.
	1904		
15409	Mar 21	John W. McLennan	Station at Fredericton, P.E.I.
15416	April 12	J. M. Clark & Co.	Stations at Northam, Richmond, Albany and Kinkora, P.E.I.
15468	" 11	Dominion Bridge Co	1 deck turntable.
15523	June 24	J. M. Clark & Co	Erect coal shed at Summerside.
15557	" 1	McLean Bros.	Moving and enlarging station at Hunter River.
15604	" 20	J. M. Clark & Co. & D. R. Morrison.	Excavating and pipe laying at Georgetown, &c.

3.—CHAMBLY CANAL.

	1904		
15397	Mar. 14	J. E. Hebert	Supply crushed stone.
15471	May 7	Phœnix Bridge and Iron Works, Ltd.	Bridges at Chambly Canton and Chambly Basin, Que.

4.—CORNWALL CANAL.

	1903		
15199	Sept. 16	Bellhouse, Dillon & Co	Supply 1,500 barrels Portland cement.
	1904		
15335	Feb. 6	Joseph J. Fallon	Wharf at foot of Pitt St., Cornwall, Ont.
	1903		
15343	Aug. 13	M. P. Davis and Quebec Bank	Varying lease, No. 12,336 and contract No. 13975.
	1904		
15408	Apl. 6	M. P. Davis	Supply 11 sets of winches, &c.
15494	May 17	J. C. Johnstone	Repair north bank of canal.
15591	June 16	"	Repair shop at Cornwall, Ont.

5.—GALOPS CANAL.

	1904		
15501	June 4	Owen Sound Wire Fence Co.	Supply wire fencing.

CONTRACTS entered into during the Fiscal Year ended June 30, 1903—*Continued.*

6.—GRENVILLE CANAL.

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1904.		
15345	Feb. 22	Fraser & Driscoll	Agreement extending time within which $150,000 shall be expended under terms of lease No. 14,375 of Dec. 1901.
15361	" 29	The Phœnix Bridge and Iron Works, Ltd.	Erect swing bridge at Stonefield.

7.—LACHINE CANAL.

	1903.		
15277	Nov 26	Dominion Bridge Co., Ltd.	Erect bridge at Cote St. Paul.
15287	Dec. 30	Bellhouse, Dillon & Co	Supply 6,000 barrels cement.
15294	" 21	Coulson, Quinlan & Robertson	Substructure of Cote St. Paul bridge.
	1904.		
15346	Feb. 10	John Quinlan	Substructure of Brewster's bridge.
15347	" 13	"	Crushed stone and stone blocks.
15437	May 6	E. A. Manny	Deliver lock gate protection appliances.
15462	Apl. 7	Dominion Bridge Co., Ltd	Superstructure of Brewster's bridge.
15484	May 9	Sicily Asphaltum Paving Co., Ltd	Pave west end of Mill street, Montreal.
15497	" 23	Ahearn & Soper, Ltd	1=60 K. W. 550 volt. D. C. generator and switchboard for Mill St. station.
15525	June 24	Bellhouse, Dillon & Co	5,000 barrels Portland cement.

8.—MURRAY CANAL.

	1904		
15395	Mar. 23	The McGregor, Banwell Fence Co., Ltd.	Supply wire fencing, &c.
15396	" 19	T. D. Sandford	Supply cedar fence and brace posts.
15498	June 7	Norman Button	Erect wire fence along both sides of canal.

9.—RIDEAU CANAL.

	1903.		
15232	Oct. 14	Hamilton Bridge Works Co., Ltd	Erect swing bridge at Hog's Back Lock Station.
	1904.		
15353	Feb. 22	Thomas McLaughlin	Substructure, Concession Street Bridge.
15388	Mar. 14	Ottawa Lumber Company	Supply timber for 1904-05.
15453	April 7	Dominion Bridge Co., Ltd	Concession Street Bridge, Ottawa.

10.—SAULT STE. MARIE CANAL.

	1903.		
15273	Nov. 17	Henry and John H. Hickler	Deepen and widen channel way at upper entrance of canal.
	1904.		
15352	Feb. 22	William Bermingham	Extension to South Mooring pier of lower entrance of canal.
15455	April 22	J. E. Murphy Lumber Co.	Timber for year 1904.
15524	June 24	Mason, Gordon & Co	" "

Contracts entered into during the Fiscal Year ended June 30, 1903—*Continued.*

11.—SOULANGES CANAL.

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1903.		
15266	Dec. 1	Thomas Prefontaine, jr..	Erect buildings at Cascade Point and Coteau du Lac, Que.
	1904.		
15467	May 31	Provincial Light, Heat & Power Co	Extend time for submission of plans.

12.—TRENT CANAL.

	1903.		
15200	Sept. 16	Bellhouse, Dillon & Co	Supply 1,500 brls. Portland cement.
15201	" 16	" "	" 10,000 " "
15206	" 23	The Sun Portland Cement Co., Ltd	" 2,000 " "
15228	" 29	The Lakefield Portland Cement Co	Agreement to determine amount of water power to be taken by company at Young's Point Dam.
15239	Oct. 10	D. Conroy...	Raise and widen roads on section 1 Simcoe Balsam Lake Division.
	1904.		
15382	Feb. 22	Brown & Aylmer	Varying contract No. 13936, Sept. 6th, 1900, *re* concrete piers at entrance of canal, Lake Simcoe.
15451	May 4	The Lakefield Portland Cement Co	Deliver 7,000 brls. Portland cement.
15474	" 6	Canadian Portland Cement Co., Ltd.	" 14,000 " "
15490	" 16	Owen Sound Portland Cement Co., Ltd.	" 7,000 " "

13.—WELLAND CANAL.

	1903.		
15196	Sept. 4	Joseph Battle	Substructures of Welland and Port Robinson Bridges, Ontario.
15207	" 23	Hamilton Bridge Works Co.... .	Superstructures of Welland and Port Robinson Bridges, Ontario.
15233	Oct. 14	Joseph Battle	Supply 600 cedar poles.
	1904.		
15296	Jan. 8	"	Setting of 2,000 electric light poles between Port Dalhousie and Port Colborne.
15348	Feb. 22	McCleary & McLean.....	Supply timber, lumber, &c., for 1904.
15349	" 22	Weddell, Battle & Manley....	Deepen rock cut at Ramey's Bend, north of village of Humberstone.
15350	" 22	Magann & Phin.....	Removal of centre pier, &c., of Port Robinson, Quaker and Welland Bridges.
15356	" 29	Mason, Gordon & Co..	Supply timber for the year 1904.
15362	" 29	John Stuart	Iron castings for the year 1904.
15389	" 25	Cunningham & Cuthbert.....	Supply iron and brass castings for 1904.
15454	May 6	Northern Aluminum Co..	Supply aluminum conductors.
15459	April 22	Hamilton Bridge Works Co., Ltd	200 steel poles.
15460	" 14	Wire & Cable Co.	Copper conductors.
16487	May 7	Thomas Riley.....	Supply weir in west bank at Allanburg.
15526	June 30	Packard Electric Co., Ltd.....	Arc lamps, regulators, &c.
15548	May 23	Can. Westinghouse Co., Ltd....	" "
15559	June 15	Ahearn & Soper, Ltd..	Submarine cables for electric transmission.

HAZEN HANSARD,
Law Clerk.

Department of Railways and Canada,
Ottawa, November 8, 1904.

No.

WATER POWER and other Public Property leased by the Department

1.—INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1903.		
15230	Sept. 24..	Town of Fraserville..	Privilege to lay and maintain two water pipes across property and under tracks of I. C. Ry. at Fraserville, Que.
15267	Dec. 1..	City of Moncton	Privilege to lay 12-inch pipe under tracks at the Irish Town Road Crossing.
15271	Nov. 10..	Kamouraska Telephone Co	Privilege to place telephone boxes in stations along line of I. C. Ry. in Quebec, where company has telephone in operation.
15275	Oct. 2..	D. Rodrigue...	Land at St. Simon, Que ....
15302	Nov. 16..	His Majesty.....	Rooms 6, 7, 8, 9 and 10, in ground story of the Board of Trade building, Montreal.
15310	Dec. 21..	F. Belziles	Privilege to lay a 1¼-inch water pipe west of St. Fabien Station.
15311	" 31..	Town of Montmagny.....	Privilege to lay a 6-inch water pipe at Montmagny, Que.
	1904.		
15312	Jan. 20..	Town of Stellarton.....	Privilege to lay a 12-inch sewer pipe at Bridge St. Crossing, N.S.
15313	" 20..	A. C. Thompson Co., Ltd.....	Privilege to lay a 6-inch pipe at N. Sydney, N.S...
	1903.		
15314	Aug. 15..	His Majesty..	Office No. 51 King St. East, Toronto, Ont.....
*15325	June 5..	"	Office No. 143 St. James St., Montreal..... ..
	1904.		
15326	Jan. 21..	Can. Automatic Scale Co.....	Privilege to place weighing scales in stations.....
15327	Feb. 6..	Acadia Coal Co.....	" lay 4-inch pipe in Stellarton, N.S.. ...
15328	Jan. 22..	Town of North Sydney.....	" lay a 12-inch pipe near North Sydney station.
15332	Feb. 1..	Dept. of Indian Affairs....	Privilege to lay 6-inch sewer pipe 1½ mile west of Sydney station, N.S.
15337	" 6..	Dept. of Agriculture	Land at Gilbert's Island, St. John, N.B.....
15379	" 24..	Railway Automatic Sales Co ...	License to place vending machines in station houses.
15381	" 22.	D. N. Lutes.....	Land at New Mills, Restigouche, N.B. .....
15394	Mar. 23..	Xavier Dumond	Land at Isle Verte station, Temiscouata, Que.....
15405	April 7..	Dominion Express Co..	Express freight business between St. John and Halifax, &c.
15411	Mar. 30..	Alex. A. Jones	Land at Amherst, N.S..... ....
15419	April 12..	Sam. Fields.	Land at Foley Station, N.S.....
15427	Mar. 29..	Dominion Molasses Co..... .	Privilege to lay pipe under tracks at Dartmouth, N.S
15430	April 25..	C. A. Atkinson.....	Land at Charlo Station, N B.. ....
15439	Mar. 23..	Town of Shediac....	Privilege to lay water pipes at Shediac, N.B.....
15440	" 23..	"	Land at Shediac, N.B..... ... .
15486	June 11..	E. H. Peeples.....	Privilege to lay 2-inch water pipe at Pirate Harbour
15516	" 30..	Jude Melanson.....	Land at Springhill Junction, N.S..... ....

* Too late for last year's report.

3.

of Railways and Canals during the Fiscal Year ended June 30, 1904.

RAILWAY.

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment.		
				Annual Rental.	Due each year.	First Instalment due.
				$ cts.		
.....	.....	During pleasure. .	Sept. 1, 1903	1 00	July 1..	July 1, '03
....	.....	" ...	Oct. 1, 1903	1 00	Oct. 1..	Oct. 1, '03
....	....	"				
2·19 acres.....	....	"	Sept. 1, 1903	1 00	Sept. 1..	Sept. 1, '03
.. ..	....	3 years.....	May 1, 1903	2,000 00	Quarterly.	Quarterly.
....	.. ..	During pleasure....	June 30, 1903	1 00	June 30..	June 30, 03
....	.....	"	Oct. 1, 1903	1 00	Oct. 1..	Oct. 1, '03
... .	.....	"	June 30, 1903	1 00	June 30..	June 30 '03
.....	.....	" ...	July 1, 1903	1 00	July 1..	July 1, '03
....	....	5 years.....	Sept. 1, 1903	1,800	Quarterly.	Quarterly.
.....	....	1 year.....	May 1, 1903	1,800	" ..	"
..... .	.....	1 "	Jan. 25, 1904	25 p.c. of gross receipts to railway and 10 p.c. to agent monthly.		
.....	.....	During pleasure....	July 1, 1903	1 00	July 1..	July 1, '03
.. ..	. .. .. .	"	" 1, 1903	1 00	" 1..	" 1, '03
....	....	" ...	" 1, 1903	1 00	" 1..	" 1, '03
5·75 acres.....	....	" .. .	" 1, 1903	1 00	" 1 .	" 1, '03
.....	....	3 years.....	Mar. 1, 1904	25 p.c. of gross receipts to railway and 10 p.c. to agent monthly.		
583 sq. ft..	....	During pleasure....	July 1, 1903	1 00	" 1 .	" 1, '03
22,208" ..	....	"	Jan. 1, 1904	5 00	Jan. 1..	Jan. 1, '04
.....	. ...	5 years.	Dec. 1, 1899	40 per cent of gross receipts, monthly.	.....	.....
240 sq. ft.....	.....	During pleasure...	April 1, 1904	5 00	April 1..	April 1, '04
0·09 acres.....	....	"	July 1, 1903	1 00	July 1..	July 1, '03
.....	....	" ...	" 1, 1903	1 00	" 1..	" 1, '03
427 sq. ft.....	....	"	" 1, 1903	1 00	" 1..	" 1, '03
....	.....	"	" 1, 1903	1 00	" 1..	" 1, '03
1,500 sq. ft....	....	"	" 1, 1903	1 00	" 1..	" 1, '03
.....	.....	"	" 1, 1903	1 00	" 1.	" 1, '03
0·58 acres.....	.. . .	" ...	May 1, 1904	5 00	May 1..	May 1, '04

No. 3.—Water Power and other Public Property leased by the Department of

2.—BEAUHARNOIS

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1903.		
15037	July 2..	James H. Ross..	Land on S. side of Canal at Melocheville, Que., with water power, &c.
15172	Aug. 14..	Thos. Prefontaine.....	Pt. of lot 1 in Valleyfield, Que.... .. ..
15198	July 1..	Jessie R. McDonald, tutrix estate Jas. McDonald.	Pt. cad. lot 830, Valleyfield, Que .. . .
15219	Oct. 6..	David F. Smith..... ..	Pt. lot No. 1 in Valleyfield, Que. .....
15221	" 9..	The Montreal Cotton Co	540 sq. ft. of land, pt. of lot No. 830 in Valleyfield, Que.
	1904		
15406	Mar. 30..	G. Leduc.....	Pt. lot 531, Valleyfield, Que..... .....
15418	April 20..	A. Lalonde....	Pt. lot 160, Ste. Cecile, Que..... ....
15479	May 16..	S. A. Brodeur	" " .....

3.—CARILLON

	1904.		
15511	June 24..	Fogarty Bros..	Privilege to erect and maintain an electrical line across old canal and Ottawa River at Carillon.

4.—LACHINE

	1903.		
15036	July 8..	John C. McDiarmid.....	Storage lots 5 and 10, between St. Gabriel Basins 3 and 4, Ste. Anne's Ward, Montreal.
15156	" 25..	Farquhar Robertson.....	Storage lot No. 16, St. Gabriel Basin, No. 3, Ste. Anne's Ward, Montreal.
15169	Aug. 5..	Jos. Decarie Fils & Cie.....	Privilege to lay a 2-in. pipe and draw water from canal between St. Ambroise St. and canal, Montreal.
15170	" 11..	Grand Trunk Ry. Co. of Canada..	Privilege to lay an additional siding 717 feet long along North bank, from Turgeon St. to John St., Montreal.
15173	" 14..	Farquhar Robertson. . . .	Storage lot No. 17, St. Gabriel Basin, No. 3, Ste. Anne's Ward, Montreal.
15202	Sept. 16..	Canadian Pacific Ry. Co	Privilege to lay a track line of railway along North bank of canal.
15211	" 28..	Ferdinand Tremblay.....	Storage lot No. 4, between St. Gabriel Basins, Nos. 3 and 4, Ste. Anne's Ward.
15214	" 28..	John McDougall, Caledonian Iron Works Co., Ltd.	Land West of new St. Gabriel Basin, No 4, Ste. Anne's Ward.
15235	" 1..	Grand Trunk Ry. Co. of Canada.	Privilege to lay spur line along North bank at St. Henri.
	1904.		
15333	Feb. 6..	Canadian Pacific Ry. Co.	Lay single track on North bank of canal.
	1903.		
15268	Nov. 16..	Ogilvie Flour Mills Co	Cad. lot 1064 and pt. lot 1065 Ste. Anne's Ward, Montreal.
	1904.		
15384	Mar. 17..	Canadian Pacific Ry. Co	Lay two transfer sidings along North bank of canal.
15476	May 23	L. Leger..... .	Land above regulating weir at Lachine.....
15477	" 25..	Ogdensburg Coal and Towing Co.	Privilege to erect elevator and conveyor, St. Henri.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended June 30, 1904—*Continued.*

CANAL.

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment.		
				Annual Rental.	Due each year.	First Instalment due.
				$ cts.		
23,304 sq. ft.	75 h. p.	10 years	July 1, 1903	Land $50, water $2.50 per h. p.	July 1	July 1, '03
1,428 "		During pleasure	" 1, 1903	1 00	" 1	" 1, '03
15,300 "		21 years, renewable	" 1, 1902	20 00	Jan. and July 1	Jan. 1, '03
2,002 "		During pleasure	" 1, 1903	1 00	July 1	July 1, '03
540 "		13 years, renewable	" 1, 1902	4 00	" 1	" 1, '02
3 arp.		During pleasure	April 1, 1904	4 50	April 1	April 1, '04
8 " 25 per		"	" 1, 1904	4 00	" 1	" 1, '04
28 " 13 "		21 years	May 1, 1904	30 00	May 1	May 1, '04

CANAL.

		During pleasure	June 1, 1904	5 00	June 1	June 1, '04

CANAL.

23,214 sq. ft.		During pleasure	July 1, 1903	348 25	July 1	July 1, '03
16,921 "		"	" 1, 1903	211 40	" 1	" 1, '03
		"	June 1, 1903	20 00	June 1	June 1, '03
		"	July 1, 1903	50 00	July 1	July 1, '03
16,912 sq. ft.		"	Aug. 1, 1903	211 40	Aug 1	Aug. 1, '03
		21 years	June 1, 1903	100 00	June 1	June 1, '03
11,607 sq. ft.		During pleasure	Oct. 1, 1903	145 09	Oct. 1	Oct. 1, '03
32,670 "		"	June 1, 1903	650 00	June 1	June 1, '03
		21 years	Sept. 1, 1903	1 00	Sept. 1	Sept. 1, '03
		21 "	Jan. 1, 1904	100 00	Jan. 1	Jan. 1, '04
59,000 sq. ft.		During pleasure	Nov. 1, 1903	1,180 00	Nov. 1	Nov. 1, '03
		21 years	Jan. 1, 1904	1 00	Jan. 1	Jan. 1, '04
17,100 sq. ft.		During pleasure	May 1, 1904	34 00	May 1	May 1, 1904
		"	" 1, 1904	1 00	" 1	" 1, 1904

No. 3.—Water Power and other Public Property leased by the Department of

No. 4.—LACHINE

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1903.		
15478	Dec. 23..	Jos. Touzin	Land on St. Gabriel Basin No. 1, Montreal
	1904.		
15482	May 23..	Canada Malting Co.	Privilege to lay a 4 in. water pipe and grain elevator leg with conveyor at St. Henri.
15508	June 10..	Hugh F. Cumming..	Land at St. Gabriel Basin No. 1
15518	" 18..	Grand Trunk Railway Co. of Canada.	Privilege to lay and maintain main track line and spur lines of railway along north bank.

No. 5.—RIDEAU

	1903.		
15151	July 21..	Ottawa Improvement Commission	Land in City of Ottawa, Ont.
15152	" 21 .	Geo. L. Dickinson	Surplus water over bulkhead across west branch of canal at Long Island, &c.
15217	Oct. 6..	Canadian Express Co..	Land on north side of canal, under Sappers' Bridge, in Ottawa, Ont.
15307	Dec. 21..	Town of Perth	Privilege to lay a 15-in. sewer pipe
	1904.		
15380	Feb. 22..	Canada Atlantic Railway Co	Parts lots F, G, Tp. of Nepean, Con. C...
15423	" 23..	Merrickville village	Privilege to lay water pipe across canal reserve at head of upper lock.
15483	May 31..	E. R. Cameron	Land on south side of canal opposite Rideauville...

No. 6.—SAULT STE.

	1904.		
15414	Mar. 23..	Algoma Central & H. B. Ry. Co.	Privilege to lay and maintain telephone cable under canal.

7.—TRENT

	1904		
15413	Apl. 6..	John J. McBain	Pt. lot 3, con. 11, Township of Douro, Peterboro...
15480	May 17..	The Lakefield Portland Cement Co.	Pt. lot 6, con. 5, Township of Smith, Peterborough, and surplus water.

8.—WELLAND

	1903.		
15150	July 21	Edward McArdle	Pt. lot No. 23 in 2nd con. of Township of Grantham, Co. of Lincoln, Ont.
15212	Sept. 28..	The Mutual Natural Gas Co., Ltd.	Privilege to lay and maintain a $2\frac{1}{2}$-in. gas pipe under canal end of swing bridge between con. 4 and 5 Township of Humberstone, Ont.

Railways and Canals during the Fiscal Year ended June 30, 1904—*Continued.*

CANAL—*Continued.*

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment.		
				Annual Rental.	Due each year.	First Instalment due.
				$ cts.		
3,375 sq. ft.	.....	During pleasure	July 1, 1903	50 00	July 1..	July 1, 1903
.....	.....	"	May 1, 1904	41 00	May 1..	May 1, 1904
3,000 sq. ft.	.....	"	June 1, 1903	45 00	June 1..	June 1, 1904
.....	.....	21 years	July 1, 1904	1,086 00	July 1..	July 1, 1904

CANAL.

47¾ acres.	.....	21 years..	June 1, 1903	1 00	June 1..	June 1, 1903
.....	.....	"	Jan. 1, 1903	50 00	Jan. and July 1.	July 1, 1903
760 sq. ft.	.....	During pleasure	Oct. 1, 1903	5 00	Oct. 1..	Oct. 1, 1903
.....	.....	"	Dec. 1, 1903	5 00	Dec. 1..	Dec. 1, 1903
1,678 acres.	.....	"	Sept. 1, 1903	75 00	Sept. 1..	Sept. 1, 1903
.....	.....	"	April 1, 1904	5 00	April 1..	April 1, 1904
1½ acres.	.....	"	May 1, 1904	5 00	May 1..	May 1, 1904

MARIE CANAL.

.....	.....	During pleasure	July 1, 1903	5 00	July 1..	July 1, 1903

CANAL.

18·54 acres.	.....	During pleasure.	Mar. 1, 1904	18 54	Mar. 1..	Mar. 1, '04
0·5 "	.....	21 years, renewable.	Nov. 1, 1903	1,210 00	Nov. and May 1.	Nov. 1, '03

CANAL.

4 acres.	.....	During pleasure ...	July 1, 1903	8 00	July 1..	July 1, '03
.....	.....	"	Oct. 1, 1903	10 00	Oct. 1..	Oct. 1, '03

No. 3.—Water Power and other Public Property leased by the Department

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1903.		
15220	Oct. 6..	Sarah Hanly	Land in Port Colborne, Ont.
15222	" 6..	Joseph Taylor	" "
15223	" 6.	W. M. McCracken	" "
15224	" 6..	Mary Kelly	" "
15225	" 6..	Richard W. Boyle	" "
15226	" 6..	Jacob Richards	" "
15238	" 26..	Bell Telephone Co. of Canada	Privilege to lay and maintain a cable under canal at Niagara St., St. Catharines, Ont.
15259	Nov. 19..	James Wilson	Surplus water at Merrickville
15308	Dec. 21..	Provincial Natural Gas Co	Privilege to lay gas pipe across Welland River at Chippawa Creek.
15309	" 31..	Imperial Natural Gas Co	Privilege to lay a 2-in. pipe across feeder at Dunnville, Ont.
	1904.		
15412	Feb. 6..	Provincial Natural Gas Co	Privilege to lay gas pipe across canal in Humberstone Township.
15426	Apl. 15..	John M. Howell	Pt. lot 15, Township of Thorold, Ont.
15435	May 4..	Niagara, St. Catharines & Toronto Ry. Co.	Land w. of w. pier at Port Dalhousie, &c.
15503	June 11..	Canadian Association of Amateur Oarsmen.	Pts. lots 21 and 22, con. 1, and pt. lot 23, cons. 2 and 3, Township of Grantham, Ont., and privilege.
15510	" 22..	Phin & Co	Pt. lot 213, Township of Thorold, Ont.
15542	" 30..	City of St. Catharines	Privilege to lay sewer from Carleton St. into the deep water of the Welland Canal.

Department of Railways and Canals,
Ottawa, November 8, 1904.

of Railways and Canals during the Fiscal Year ended June 30, 1904—*Continued.*

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment.		
				Annual Rental.	Due each year.	First Instalment due.
				$ cts.		
2·19 acres.		During pleasure	Sept. 1, 1903	1 00	Sept. 1	Sept. 1, '03
0·83 "		"	" 1, 1903	1 00	" 1	" 1, '03
0·50 "		"	" 1, 1903	1 00	" 1	" 1, '03
0·17 "		"	" 1, 1903	1 00	" 1	" 1, '03
0·66 "		"	" 1, 1903	1 00	" 1	" 1, '03
0·16 "		"	" 1, 1903	1 00	" 1	" 1, '03
		"	Oct. 1, 1903	5 00	Oct. 1	Oct. 1, '03
	25 h.p.	21 years, renewable	July 12, 1902	135 00	Jan. and July 1	July 17, '02
		During pleasure	Jan. 1, 1904	5 00	Jan. 1	Jan. 1, '04
		"	Dec. 1, 1903	5 00	Dec. 1	Dec. 1, '03
		"	Dec. 1, 1903	5 00	Dec. 1	Dec. 1, '03
8⅓ acres.		"	Mar. 1, 1903	25 00	Mar. 1	Mar. 1, '03
5·14 acres.		10 years	May 1, 1904	65 00	May 1	May 1, '04
0·23, 2·33, 2·20 acres.		During pleasure	" 1, 1904	1 00	" 1	" 1, '04
20 acres		To Dec. 31, 1904				
		During pleasure	July 1, 1904	2 00	July 1	July 1, '04

HAZEN HANSARD,
Law Clerk.

No.

PROPERTY CONVEYED to the Department of Railways and Canals

1.—CANADIAN

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
15441	Mar. 29, '04	His Majesty to Canadian Pacific Ry. Co.	Pt. of main line of company's railway; station between Fort William and Manitoba.	
15442	" 29, '04	Can. Pac. Ry. Co.	*Re* above letters patent No. 15441.	

2.—PRINCE EDWARD

15544	May 12, '04	Neil Stewart *et ux* ...	Land at Curtis Creek	Tp. No. 32 .....
15545	" 13, '04	William Stewart *et ux*..	" "	" .....
15546	June 1, '04	Richard Stockman *et ux*.	" "	" .....
15551	May 26, '04	C. E. McKinnon.....	" "	" .....
15574	" 20, '04	James Watts *et ux*.....	" "	" .....

3.—INTERCOLONIAL

15231	Aug. 4, '03	Elizabeth Veith *et al*....	Land near Spring Hill Jct....	.....
15262	Nov. 3, '03	Fred. W. Sumner *et ux*..	Land in parish of Bathurst...	.....
15304	" 13, '03	Alfred Girard	Pt. Lot 27, parish of Ste. Monique	.....
15319	Sept. 29, '03	Joseph E. Pouliot.....	Pt. Lot 613, Fraserville	Town of Fraserville..
15320	" 14, '03	Dame Nap. Aubin	Lot No. 423, and Pt. Lot No. 421	Ste. Flavie Parish..
15321	Nov. 3, '03	George Rioux.....	Pt. lots Nos. 484, 485, and 489....	" .....
15322	" 3, '03	D. Rioux.....	Pt. lots Nos. 486 and 487	" .....
15334	Jan. 27, '04	Jos. Turgeon	Pt. Lot 409, Lauzon Ward.	Lévis.....
15336	Feb. 4, '04	Allen McDonald *et ux*...	Land at Dartmouth	.....
15342	Jan. 21, '04	His Majesty to Bethel Cemetery Co.	Land at Scotsburn.....	.....
15383	Feb. 23, '04	Railways and Canals to Public Works.	Pt. lot 427, Lévis, Que.....	Lévis.....
15402	Jan. 21, '04	B. H. Collins *et ux*	Land at..	Halifax.....
15403	Feb. 9, '04	Jno. Greenway *et ux*	"	" .....
15420	April 5, '04	Jos. & Ed. Goulet. . .	Pt. Cad. Lot No. 7, St. Lawrence Ward.	Lévis.....
15421	July 15, '03	His Majesty to Dominion Iron and Steel Co., Ltd.	Land covered by water, Pt. of Mugaah's Creek.	Sydney .....
15422	April 11, '04	Sam. Malouin.....	Privilege to lay sewer pipes at Chaudière Jct., Que.	.....
15429	Nov. 9, '03	Esther McLean.....	Land at.....	Barrachois .....
15443	Feb. 27, '04	Wm. A. Patterson	Land near DeBert Stn	.....
15446	Mar. 25, '04	John W. Burton.....	Land at Halifax, N.S.....	.....
15513	April 12, '04	Jane J. Morris	"	.....
15514	" 15, '04	Thos. W. Keating, *et ux*.	"	.....
15515	" 13, '04	Davis & Fraser, *et ux*....	"	.....

4.—BEAUHARNOIS

15424	" 19, '04	His Majesty to Denis Frère.	Parcel of Canal reserve at	Valleyfield.....

4.

and Letters Patent granted during the Fiscal Year ended June 30, 1904.

PACIFIC RAILWAY.

County.	Area.	Amount.	Remarks.
		$ cts.	
.....	.....	.....	Letters Patent supersedes Nos. 13554, 13555 and 13556.
.....	.....	.....	Release.

ISLAND RAILWAY.

Queen's	2·26 acres	226 00	
"	0·91 "	91 00	
"	3·28 "	377 20	
"	1 "	100 00	
"	1·70 "	170 00	

RAILWAY.

Cumberland, N.S.	14·30 acres	180 28	
Gloucester, N.B	2·81 "	75 00	
Nicolet, Que	11,596 sq. ft.	100 00	
Témiscouata	18½ arp.	11,100 00	
Rimouski ...	5·39 "	1,617 00	
"	5·36 "	536 00	
"	4·14 "	414 00	
Lévis	1,640 sq. ft ...	2,296 00	
Halifax, N.S.	975 "	* 386 99	
Pictou, N.S.	.....	.....	Letters Patent.
Lévis	6,500 "	.....	O. C.
Halifax, N.S	2,176 "	5,000 00	
"	3,450 "	2,250 00	
Lévis	1,622 "	4,873 09	
Cape Breton, N.S.	.....	.....	Letters Patent.
.....	.....	100 00	
Cape Breton, N.S.	.....	75 00	
Colchester, N.S.	.....	360 47	
Halifax, N.S	2,618 sq. ft.	5,000 00	
"	4,350 "	3,200 00	
"	1,000 "	700 00	
"	7,200 "	5,000 00	

CANAL.

Beauharnois	6,400 sq. ft.	2,240 00	Letters Patent.

No. 4.—Property Conveyed to the Department of Railways and Canals and

5.—CORNWALL

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
15241	Oct. 24, '03	Cornelius C. Miller	Pt. lots 1 and 2, Con. 1, Sheik's Id.	Tp. of Cornwall
15263	Nov. 19, '03	James A. Langelier	Pt. lot 3, Con. 1, Sheik's Island	"
15264	" 11, '03	David Tilton	" "	"
15433	April 4, '04	M. F. Sheets	Pt. lot 2, Con. 1 "	"
15434	" 4, '04	Jas S. Raymond, *et al*	Pt. W ½ lot 5, Con. 1 "	"
15450	" 4, '04	Alonzo S. Raymond, *et al*	Pt. E ½ lot 5, and E. ½ lot 6, Sheik's Island.	"

6.—GALOPS

15331	Jan. 29, '04	Maggie R. Binion	Pt. W ½ lot 30, Con. 1	Tp. of Matilda

7.—RAPIDE PLAT

15278	Oct. 19, '03	J. Sayeau, *et ux*	Pt. lots 14 and 15 in Mariatown.	Tp. of Williamsburg
15282	Dec. 9, '03	Ruth Rose, *et al*	Lot 13 and adjoining St., Mariatown.	"

8.—SOULANGES

15265	Aug. 23, '03	Moise Boyer	Lot 74	Cascade Pt
15305	Nov. 20, '03	Alex. Leroux	Lots 44 to 47 & 64 to 67	St. Michel de Vaudreuil
15407	Mar. 29, '04	Honoré Leroux	Pt. lots 12 & 107	St. Ignace du Coteau du Lac.

9.—TRENT

15260	Sept. 30, '03	Esther Collins	Pt. W ½ lot 27, Con. 2	Eldon
15261	Oct. 22, '03	Helen Sheehy, *et al*	Pt. lot 2, 6th Con	Carden
15270	Nov. 10, '03	H. Folliott *et ux*	Pt E ½ lot H 1st Con	Eldon

10.—ST. LAWRENCE

15285	Oct. 26, '03	Alban Dawson, *et al*	Pt. Isle au Galop, in St. Lawrence R.	Town of Lisbon
15285	Nov. 9, '03	Angus W. Fraser	" "	"
15285	Oct. 26, '03	Alban Dawson, *et al*	Released for damages consequent upon construction of a dam from Adam's Island to Les Galops Island.	

Department of Railways and Canals,
November 8, 1904.

SESSIONAL PAPER No. 20

Letters Patent granted during the Fiscal Year ended June 30, 1904—*Concluded.*

CANAL.

County.	Area.	Amount.	Remarks.
		$ cts.	
Stormont	6·15 acres	$403.91, $142 55 costs.	
"	0·78 "	$130.64, $78 03 costs.	
"	5·56 "	$735.60, $171 72 costs.	
"	8·71 "	$873.89, $152 00 costs.	
"	4·31 "	$1,199.91, $177 41 costs.	
"	1·17, 2·37 acres	$1,828.04, $141 13 costs.	

CANAL.

Dundas	1·43 acres	$2,590 40	

CANAL.

Dundas	0·12 acres	100 00	
"	0·20 "	75 00	

CANAL.

Vaudreuil	15 perches	Pr. $65.00, Int. $42.73.	
"		8 14	
Soulanges	0·67, 0·6 acres	424 80	

CANAL.

Victoria	0·65 acres	40 00	
"	9·20 "	200 00	
"	0·87 "	40 00	

RIVER.

St. Lawrence, U.S.	1 acre	4,000 00	
"	"	1 00	

HAZEN HANSARD,
Law Clerk.

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended June 30, 1904.

1.—INTERCOLONIAL RAILWAY.

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1903.			$ cts.
15289	Dec. 29	Ronald J. Nicholson	Damages to certain lands at Barachois Harbour, N.S.	70 00
15290	" 23	Carl White	Damages to lot 115 at College Bridge, N.B	25 00
15297	" 26	Mrs. M. Thibeault	Damages to lot 205 in Parish of St. Simon, Co. of Rimouski, Que	140 00
	1904.			
15431	Mar. 15	Chas. McIntyre	Improving crossing at McIntyre Lake, Station, N.S.	35 00
15506	May 31	F. X. Deschamplain	Damages to land at Ste. Luce, Co. of Rimouski, Que.	150 00

2.—CULBUTE CANAL.

	1904			
15363	Jan. 26	Alpheus Colton	Damages to land, lots 9 and 10, Tp. of Mansfield	250 00
15364	Feb. 8	F. Hearty, *et al*	" " lot 15, Tp. of Litchfield	125 00
15365	" 12	M. & F. Hearty	" " " 15, " "	125 00
15366	Jan. 15	Azaire Pepin	" " " 25, " Grand Calumet	75 00
15367	" 19	"	" " " 14, " Litchfield	150 00
15368	" 5	Henriette Belanger	" " " 2, " Grand Calumet	50 00
15369	" 28	Geo. Dufault	" " " 1, " "	20 00
15370	Feb. 17	Peter McCuaig	" " " 18, " "	87 00
15371	" 15	Norman McCuaig, *et al*	" " " 7, " Litchfield	150 00
15372	Jan. 21	Chas. Barsalon	" " " 27, " Grand Calumet	15 00
15373	" 25	Jas. T. Pattison	" " " 3 & 4 " Litchfield 2, " "	122 50
15374	" 12	Wm. Lett	" " " 11, " Grand Calumet	20 00
15375	" 13	Monique Bertrand	" " " 20, " "	200 00
15376	" 18	Jas. & Thos. Hanrahan	" " " 7, " "	180 00
15377	" 30	Joseph Pigeon	" " " 2, " "	50 00
15378	Feb. 22	James Lafferty, *et al*	" " " 5, " Litchfield	100 00
15392	" 10	Jno. Lafferty, *et al*	" " " 5, " "	100 00
15425	Apl. 15	Jno. Connolly, *et al*	" " " 28, " Mansfield	175 00
15444	Mr. 22 Apl. 21	Patrick Sullivan	" " " 33, " Grand Calumet, Oak Island, Tp. of Westmeath, Co. of Renfrew, Ont	150 00
15533	June 18	George Rose	" " " 16, " Grand Calumet	60 00

3.—FARRAN'S POINT CANAL.

	1903.			
15160	July 16	Ira Empy, *et al*	Damages consequent upon deprivation of access to waters of St. Lawrence river	150 00
15291	Dec. 17	Margaret S. Brown	Damages to lots 13 and 14	75 00
	1904.			
15330	Feb. 5	Cyrus Stata	" " "	150 00
15341	Feb. 5	Geo. Pomeroy	Damages to lot 14, in Co. Stormont, Ont	35 00 and int. at 5 p.c. from Mar. 27, 1900.
15344	" 22	Mossin Dafoe, *et al*	Damages to lots 11 and 12	200 00

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended June 30, 1904—*Concluded.*

4.—GALOPS CANAL.

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1904.			$ cts.
15339	Feb. 13	Thos. A. Thomson, *et al.*	Damages to lots 2 and 3, Village of Iroquois	708 29

5.—LACHINE CANAL.

	1904			
15318	Jan. 16	Chas. H. Letourneux	Damages to lots Nos. 1,703 and 3,413, Parish of Montreal, Que	858 91

6.—MURRAY CANAL.

	1904			
15438	Apl. 27	Wm. A. Johnson	House on canal land near railway bridge	850 00

7.—TRENT CANAL.

	1903.			
15255	Nov. 2	Alexander Robertson	Damages caused to goods	40 00
15256	" 4	Neil McNabb	Damages caused by loss of horse	150 00
	1904.			
15323	Jan. 29	County of Peterborough	Contribution towards construction and maintenance of bridge at Gannon's Narrows	1,000 00
15500	June 11	Grank Trunk Ry. Co. of Canada	Construction of swing bridge between Beaverton and Gamebridge	3,400 00

8.—WELLAND CANAL.

	1903.			
15237	Aug. 12	Mun. of Co. of Welland	Construction and maintenance of Montrose bridge	9,000 00
15240	Oct. 12	Phillip Tufford, *et al*	Damages to W ½ lot No. 14, Tp. of S. Cayuga	97 37
	1904.			
15354	Feb. 22	Wm. T. Anthony	Damages by erosion of banks and loss of timber	500 00

9.—ST. LAWRENCE RIVER.

	1903.			
	Oct. 26	Alban Dawson, *et al*	Deed for $4,000 of 1 ac. pt. Isle au Galops	} 4,000 00
15285	Nov. 6	Angus W. Fraser	" " " " "	
	Oct. 26	Alban Dawson, *et al*	Damages upon construction of dam	1 00

HAZEN HANSARD,
Law Clerk.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, NOVEMBER 8, 1904.

PART V

CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1903

CANAL STATISTICS

FOR

SEASON OF NAVIGATION, 1903.

For the seasons of navigation of 1903 and 1904, all the canals were declared free, consequently no tolls were collected for the present year. The statistics as compiled show the revenue as it would appear if tolls had been collected.

Both the revenue and tonnage show a very large increase on all the canals for the present year, as per statements herewith presented.

REVENUE.

The total revenue, exclusive of hydraulic rents for two years, is as follows:—

For 1902	$ 227,577 93
For 1903	333,096 86

By comparing the statistics of 1902 with 1903, it will be seen that the gross revenue has increased $105,518.93.

The increases and decreases are as follows:—

	Increase.	Decrease.
On the Welland Canal	$ 38,355 21	
" St. Lawrence Canals	58,860 54	
" Chambly Canal	2,048 93	
" Ottawa Canals	4,667 84	
" Rideau Canal	1,142 44	
" St. Peter's Canal	267 20	
" Trent Valley Canals	162 59	
" Murray Canal	64 18	
" Sault Ste. Marie Canal		$ 50 00
Total	$105,568 93	$ 50 00
Total increase	105,518 93	

STATEMENT of the Revenue, together with the increases and decreases of all the Canals for the seasons of Navigation from 1891 to 1903 inclusive.

Years.	Revenue.	Increase.	Decrease.
1891	$ 350,351 97	$ 2,292 46	
1892	358,711 04	8,359 07	
1893	348,012 00		$ 10,699 04
1894	307,824 67		40,187 33
1895	283,211 41		24,613 26
1896	350,061 03	66,849 62	
1897	346,758 87		3,302 16
1898	341,679 23		5,079 64
1899	291,652 37		50,026 86
1900	269,116 25		22,536 12
1901	250,949 57		18,166 68
1902	227,577 93		23,371 64
1903	333,096 86	105,518 93	

GRAIN PASSED DOWN WELLAND.

The quantity of barley, corn, oats, pease, rye and wheat passed down the Welland Canal, from ports west of Port Colborne for a period of twenty-two years is as follows :—

	Quantity passed down to Montreal.	Quantity on which full tolls were paid. (Free for 1903.)	
		To ports in Ontario.	Quantity from U. S. Ports to U.S. Ports.
	Tons.	Tons.	Tons.
1882	180,694		63,881
1883	186,814	10,650	121,876
1884	142,194	12,153	104,537
1885	96,569	11,909	117,346
1886	203,940	9,881	151,551
1887	185,034	11,838	134,868
1888	160,358	25,599	169,664
1889	267,769	19,075	213,766
1890	288,513	16,899	245,932
1891	295,509	6,805	202,710
1892	261,954	8,942	201,540
1893	501,806	25,555	222,958
1894	273,651	16,699	203,979
1895	231,491	32,096	133,823
1896	461,049	73,386	160,372
1897	*560,254	53,257	157,756
1898	519,532	31,279	144,612
1899	332,746	40,197	68,011
1900	244,661	17,525	84,589
1901	151,566	13,732	83,370
1902	208,215	22,787	81,164
1903	351,936	29,062	111,828

* Of the quantity of grain passed down to Montreal there were transhipped at Ogdensburg, in 1891, 17,817 tons ; in 1892, 4,341 tons ; in 1893, 71,445 tons ; in 1894, 23,030 tons ; in 1895, 18,987 tons ; in 1896, 77,355 tons ; in 1897, 89,659 tons ; in 1898, 40,257 tons ; in 1899, 48,828 tons ; in 1900, 38,403 tons ; in 1901, 17,387 tons ; in 1902, 34,060 tons, and 40,641 tons in 1903.

The tolls on grain for passage through the Welland Canal prior to 1884 were 20 cents a ton ; since that date, however, reductions have been made by Orders in Council from year to year as follows :—Upon the urgent request of forwarders and others interested in the grain trade, a reduction was made of one-half the usual rate of tolls on grain passing down the Welland Canal and the St. Lawrence Canals to Montreal ; and in 1885 tolls were reduced to 2 cents a ton, and thereafter from year to year, including 1891.

In 1892 the tolls were reduced to 2 cents a ton on grain passed down the Welland and St. Lawrence Canals and exported, and in such cases only.

In 1893 by Order in Council of February 13, the tolls were reduced to 10 cents a ton on grain passing eastward through the Welland Canal, irrespective of its destination, and the same rate of tolls for 1894 were allowed by O.C., April 16, 1894.

For the year 1895 (O.C., April 1, 1895), the same rate of tolls was allowed as was granted for the year 1894.

For the year 1896 (O.C., April 23, 1896), the same rate of tolls was allowed as was granted for the year 1895.

For the year 1897 (O.C., April 17, 1897), the same rate of tolls was allowed as was granted for the year 1896.

For the year 1898 (O.C., June 1, 1898), the same rate of tolls was allowed as was granted for the year 1897.

For the year 1899 (O.C., April 10, 1899), the same rate of tolls was allowed as was granted for the year 1898.

For the year 1900 (O.C., February 20, 1900), the same rate of tolls was allowed as was granted for the year 1899.

For the year 1901 (O.C., May 3, 1901), the same rate of tolls was allowed as was granted for the year 1900.

For the year 1902 (O.C., April 1, 1902), the same rate of tolls was allowed as was granted for the year 1901.

For the year 1903 the canals were declared free of tolls. O.C., April 27, 1903.

The rate through the St. Lawrence Canals only, was 10 cents a ton.

It may be remarked that goods having paid full tolls on the Welland Canal are allowed to pass down the St. Lawrence Canals to Montreal free from payment of any further tolls.

During the last decade the quantity of agricultural products as above, passed down the Welland and St. Lawrence Canals to Montreal, has increased from 273,651 tons in 1894 to 351,936 tons in 1903, and the quantity passed down the Welland Canal from United States ports to United States, has decreased from 203,979 to 111,828 tons for the same years.

The quantity of barley, buckwheat, corn, oats, pease, rye and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific Railways for a period of 13 years, is reported as follows :—

	Tons.
For 1891	184,410
1892	291,680
1893	147,610
1894	60,666
1895	51,114
1896	153,717
1897	228,611
1898	293,391
1899	209,170
1900	229,624
1901	227,700
1902	263,861
1903	253,959

The quantity of the same articles passed down the whole length of the St. Lawrence Canals to Montreal, for the same period was :—

	Tons.
For 1891	320,434
1892	302,899
1893	532,084
1894	288,015
1895	247,550
1896	495,898
1897	604,200
1898	575,097
1899	372,291
1900	295,928
1901	203,316
1902	242,225
1903	400,057

Comparative shipments of grain by the St. Lawrence route, and rail and water via the State of New York, are as follows :—

QUANTITY OF GRAIN TO SEA-BOARD BY COMPETING ROUTES.

The quantity of grain and pease passed down the whole length of the St. Lawrence Canal to Montreal, is as follows :—

	Tons.
For 1902	242,225
1903	400,067
Showing an increase of	157,842

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways, is reported as follows :—

	Tons.
For 1902	263,861
1903	253,959
Showing a decrease of	9,902

The quantity of grain arrived at tide-water by New York Canals, is reported as follows :—

	Tons.
For 1902	318,677
1903	327,840
Showing an increase of	9,163

The quantity of grain carried to tide-water by the New York railways, is reported as follows :—

	Tons.
For 1902	4,558,536
1903	3,793,973
Showing a decrease of	764,563

The increases and decreases for 1903 as compared with 1902 on the several routes, competing for the carrying trade to the sea-board, are as follows :—

—	Increase.	Decrease.	Increase.	Decrease.
	Tons.	Tons.	Per cent.	Per cent.
On the St. Lawrence Canals	157,842	.....	65·21	.....
" Canadian Pacific and Grand Trunk Railways.	.....	9,902	.....	3·72
" New York Canals	9,163	.....	2·88	.....
" " Railways	.....	764,563	.....	16·77

By reference to Appendix U, it will be seen that the quantity of freight from ports west of Port Colborne to the United States ports, Oswego, Ogdensburg, &c., has decreased from 330,403 tons in 1892 to 213,449 tons in 1903 and the quantity to Ontario ports, between Port Dalhousie and Cornwall, and an increase from 69,886 tons in 1892 to 111,360 tons in 1903. The quantity passed down to Montreal shows an increase from 267,485 tons in 1892 to 390,786 tons in 1903.

TRANSHIPMENT OF GRAIN.

The quantity of grain passed down the Welland Canal in Canadian and United States vessels to Kingston and Prescott for fifteen years, is as follows:—

In Canadian vessels there were in—

			Tons.
1889,	208	Cargoes, with an aggregate quantity of	165,117
1890,	203	" "	184,275
1891,	209	" "	190,664
1892,	158	" "	159,018
1893,	146	" "	148,962
1894,	125	" "	159,145
1895,	123	" "	136,617
1896,	196	" "	227,912
1897,	180	" "	229,265
1898,	166	" "	224,021
1899,	162	" "	221,306
1900,	325	" "	183,200
1901,	112	" "	132,558
1902,	131	" "	175,514
1903,	170	" "	218,840

In the United States vessels there were in—

			Tons.
1888,	60	Cargoes, with an aggregate quantity of	43,667
1889,	114	" "	108,358
1890,	35	" "	35,560
1891,	77	" "	90,153
1892,	89	" "	109,812
1893,	257	" "	328,269
1894,	84	" "	106,236
1895,	56	" "	73,987
1896,	158	" "	217,978
1897,	197	" "	285,847
1898,	339	" "	464,852
1899,	167	" "	205,571
1900,	259	" "	163,575
1901,	135	" "	123,229
1902,	135	" "	136,652
1903,	219	" "	273,986

Fifty-six Canadian and 18 American vessels took cargoes of 99,582 tons through to Montreal intact in 1903; 19 Canadian and 17 American of 34,804 tons in 1902; 23 Canadian and 2 American of 17,303 tons in 1901, 15 of 7,924 tons in 1900, 2 of 558 tons in 1899, 7 of 2,426 in 1898, 7 of 2,324 in 1897, 3 of 1,176 in 1896, 4 of 1,344 tons in 1895, 2 cargoes of 810 tons in 1894, none in 1893, 2 in 1892 of 924 tons, and 3 in 1891 of 1,441 tons. Three vessels lightened a portion of their cargoes in 1901, 9 in 1900, 11 in 1899, 25 in 1898, 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 222 vessels discharged the whole of their cargoes at Kingston in 1901, 540 in 1900, 316 in 1899, 473 in 1898, 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

The quantity of grain transhipped at Port Colborne in 1903 and the four previous years is given below.

The total number of grain-laden vessels lightened at this port in 1903 was 117, against 99 the previous year.

The quantity of grain lightened was as follows :—

Articles.	1899.	1900.	1901.	1902.	1903.
	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat	390,162	272,609	393,490	577,697	670,302
Corn	638.143	448,256	556,911	529,651	834,718
Rye	7,065	Nil.	Nil.	Nil.	13.768
Oats	Nil.	Nil.	76,236	5,824	2.765
Barley	Nil.	Nil.	27,115	Nil.	13.242

WELLAND CANAL.

The total quantity of freight passed on the Welland Canal during the season of 1903 was 1,002,919 tons ; of this quantity 23,102 tons were way or local freight.

There were 732,829 tons of freight passed eastwards, and 270,090 tons passed westwards.

East and west bound Through Freight.

The total quantity of through freight passed through the whole length of the Welland Canal during the season of 1903 was 979,817 tons.

Of this quantity 715,595 tons were east bound and 264,222 west bound freight.

Of the east bound through freight, Canadian vessels carried 324,176 tons and United States vessels carried 391,419 tons ; and of the west bound through freight Canadian vessels carried 76,315 tons and United States vessels carried 187,907 tons, or a total of 400,491 tons for Canadian and 579,326 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1903 was 1,681,-206 tons ; of this quantity 1,222,609 tons passed eastward and 458,597 passed westward.

East and west bound Through Freight.

The total quantity of through freight was 967,817 tons ; of this quantity 756,379 tons were east bound and 211,438 tons were west bound.

Way Freight.

Of the total quantity of (way) or local freight 466,230 tons were east bound and 247,159 tons west bound freight.

THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freights passed eastward and westward through the Welland and St. Lawrence Canals, from Lake Erie to Montreal, during fifteen years, is as follows :—

	Eastward to Montreal. Tons.	Westward from Montreal. Tons.
1889	298,197	25,370
1890	231,746	13,951
1891	309,593	14,060
1892	263,144	9,452
1893	508,016	16,545
1894	292,191	9,439
1895	266,659	10,555
1896	480,077	10,050
1897	584,246	4,542
1898	538,108	4,436
1899	354,933	5,991
1900	288,251	6,217
1901	184,420	13,714
1902	250,475	25,289
1903	390,786	100,699

THROUGH FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of through freight passed eastward and westward through the Welland Canal, from United States ports to United States ports, for a period of fifteen years, is as follows :—

	Eastward. Tons.	Westward. Tons.	Total. Tons.
1889	297,353	266,231	563,584
1890	318,259	215,698	533,957
1891	306,257	247,543	553,800
1892	300,733	240,332	541,065
1893	384,559	247,108	631,667
1894	361,319	230,948	592,267
1895	255,259	214,520	469,779
1896	385,695	267,518	653,213
1897	353,863	210,831	564,694
1898	277,023	210,516	487,539
1899	225,491	135,038	360,529
1900	218,969	99,560	318,529
1901	190,476	83,543	274,019
1902	224,110	44,919	269,029
1903	221,074	149,151	370,225

The total quantity of freight passed through the Welland Canal from United States ports to United States ports shows an increase of 101,196 tons, as compared with the previous year; and a decrease of 193,359 tons as compared with 1889.

The following statement shows the aggregate number of vessels, and the total quantity of freight passed through the Welland Canal, and the quantity passed between United States ports during the years 1867 to 1903 inclusive :—

Fiscal Year.	Aggregate number. of Vessels.	Total quantity transported on the Welland Canal.	Quantity passed from United States ports to United States ports.
	Number.	Tons.	Tons.
1867	5,405	933,260	458,386
1868	6,157	1,161,821	641,711
1869	6,069	1,231,903	688,706
1870	7,356	1,311,956	747,567
1871	7,729	1,478,122	772,756
Season of navigation.			
1872	6,063	1,333,104	606,627
1873	6,425	1,506,484	656,208
1874	5,814	1,389,173	748,557
1875	4,242	1,038,050	477,809
1876	4,789	1,099,810	488,815
1877	5,129	1,175,398	493,841
1878	4,429	968,758	373,738
1879	3,960	865,664	284,043
1880	4,104	819,934	179,605
1881	3,332	686,506	194,173
1882	3,334	790,643	282,806
1883	3,267	1,005,156	432,611
1884	3,138	837,811	407,079
1885	2,738	784,928	384,509
1886	3,589	980,135	464,478
1887	2,785	777,918	340,501
1888	2,647	878,800	434,753
1889	2,975	1,085,273	593,584
1890	2,883	1,016,165	533,957
1891	2,594	975,013	553,800
1892	2,615	955,554	541,065
1893	2,843	1,294,823	631,667
1894	2,412	1,008,221	592,267
1895	2,222	869,595	469,779
1896	2,766	1,279,987	653,213
1897	2,725	1,274,292	564,694
1898	2,384	1,140,077	487,539
1899	2,202	789,770	360,529
1900	2,399	719,360	318,529
1901	1,547	620,209	274,019
1902	1,568	665,387	269,029
1903	1,787	1,002,919	370,225

The total quantity of freight passed through the several divisions of the canals during the season of 1903 is as follows :—

	Farm Stock.	Forest Produce of Wood.	Manufactures.	Merchandise.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland	2	158,721	85,647	214,556	543,993	1,002,919
St. Lawrence	1,770	191,813	162,515	523,564	801,544	1,681,206
Chambly	374	188,335	7,647	112,334	37,881	346,571
Ottawa	1,410	410,620	726	15,557	8,160	436,473
Rideau	19	29,093	3,600	21,848	6,560	61,120
St. Peters	17	21,691	5,494	49,681	13,981	90,864
Murray	8	7,405	8,195	8,940	5,841	30,389
Trent Valley	219	40,477	74	113	1,524	42,407
Sault Ste. Marie	61	76,725	110,683	3,884,140	1,440,259	5,511,868

The total quantity of freight moved on the Welland Canal was 1,002,919 tons, of which 543,993 tons were agricultural products.

On the St. Lawrence Canals the total quantity of freight moved was 1,681,206 tons, of which 801,544 were agricultural products, and 523,564 tons were merchandise.

On the Ottawa Canals the total quantity of freight moved was 436,473 tons : of this quantity 410,620 tons were the produce of the forest.

STATISTICAL COMPARISON OF VARIOUS UNITED STATES ROUTES.

The statistical comparisons heretofore given in respect to the quantities of the principal articles carried through the Welland Canal, and those carried over routes in the United States, in competition with that work, have been continued to date.

By reference to statement H, as to the quantity of vegetable food carried to tidewater, it will be observed that the quantity carried by the New York Canals was 512,601 tons in 1903, 489,053 in 1902, 557,099 in 1901, 472,857 in 1900, 577,486 in 1899, 653,027 in 1898, 744,575 in 1897, 957,182 in 1896, 606,505 in 1895, 1,400,129 in 1894, 1,450,116 in 1893, 937,999 in 1892, and 1,092,385 in 1891.

The quantities of vegetable food carried by the New York Central, Erie and New York, West Shore and Buffalo Railways being :—

	Tons.		Tons.
In 1903	5,548,603	In 1887	*3,847,766
1902	6,532,263	1886	*3,802,262
1901	6,334,001	1885	4,105,594
1900	6,053,005	1884	3,639,805
1899	6,211,827	1883	4,422,461
1898	7,060,542	1882	3,885,557
1897	5,673,638	1880	4,732,385
1896	5,183,540	1869	1,087,809
1895	3,798,574		
1894	4,281,056		
1893	*5,107,426		
1892	5,913,013		
1891	3,565,381		
1890	4,336,199		
1889	3,654,984		
1888	3,197,734		

*Flour and grain only.

The following figures are an abstract of the quantities of vegetable food carried to tide-water by the canals and railways of the State of New York during thirty-five years :—

——	Canals.	Railways.	Total.	Proportions by canals.
	Tons.	Tons.	Tons.	Tons.
1869.	1,302,613	1,087,809	2,390,342	·545
1870.	1,295,010	1,766,457	3,061,467	·423
1871.	1,850,198	2,205,589	4,055,787	·456
1872.	1,674,320	1,870,614	3,544,934	·472
1873.	1,745,171	2,036,992	3,782,163	·461
1874.	1,767,598	2,791,517	4,559,115	·387
1875.	1,305,550	2,343,241	3,648,791	·357
1876.	1,064,293	2,875,803	3,940,096	·270
1877.	1,498,984	2,493,683	3,992,667	·375
1878.	1,912,734	3,695,764	5,608,498	·341
1879.	1,833,399	4,353,617	6,187,016	·296
1880.	2,371,090	4,732,385	7,103,475	·333
1881.	1,116,561	4,983,722	6,100,283	·183
1882.	1,118,776	3,885,557	5,004,333	·223
1883.	1,379,000	4,422,461	5,801,461	·237
1884.	1,236,986	3,639,805	4,876,791	·253
1885.	1,063,310	4,105,594	5,168,904	·205
1886.	1,489,886	3,802,262	5,292,148	·281
1887.	1,539,403	3,847,766	5,387,169	·285
1888.	1,166,958	3,197,734	4,364,692	·267
1889.	1,296,896	3,654,984	4,951,880	·262
1890.	1,167,901	4,336,199	5,504,100	·212
1891.	1,092,355	3,565,381	4,657,736	·234
1892.	937,999	5,913,013	6,851,012	·137
1893.	1,452,563	5,107,426	6,599,989	·284
1894.	1,400,129	4,281,056	5,681,185	·327
1895.	602,505	3,798,574	4,401,079	·159
1896.	957,182	5,183,540	6,140,722	·156
1897	744,575	5,673,638	6,418,213	·116
1898.	653,027	7,060,542	7,713,569	·085
1899	577,486	6,211,827	6,789,313	·086
1900.	472,857	6,053,005	6,525,862	·073
1901.	557,099	6,334,001	6,891,100	·081
1902.	489,053	6,532,263	7,021,316	·069
1903.	512,601	5,548,603	6,061,204	·081

COMPARATIVE STATEMENT OF TRAFFIC BY RAILWAYS AND CANALS VIA THE STATE OF NEW YORK.

On reference to the returns made by the railways to the state authorities of New York, and to the canal statistics submitted to the state legislature, I find that of the total tonnage of freight carried by the canals and railways, the state canals carried :—

	Per cent.		Per cent.
In 1859.	68·9	In 1886.	16·9
1869.	47·0	1887.	16·3
1870.	38·9	1888.	18·8
1871.	38·9	1889.	15·1
1872.	40·1	1890.	13·9
1873.	34·9	1891.	13·4
1874.	31·7	1892.	9·8
1875.	28·4	1893.	10·1
1876.	24·6	1894.	10·2
1877.	28·3	1895.	9·7
1878.	27·1	1896.	8·5
1879.	23·7	1897.	8·3
1880.	25·1	1898.	6·9
1881.	18·5	1899.	7·2
1882.	19·0	1900.	5·2
1883.	18·7	1901.	5·1
1884.	19·0	1902.	5·5
1885.	17·1	1903.	5·6

The quantity of freight carried by the canals and railways was greater in 1903 by 207,734 tons than the quantity carried in 1902 and an increase of 59,830,334 tons over 1869.

The quantities carried were as follows:—

	Total Tonnage.	Proportion by canals.
In 1859	5,485,076	·6890
1869	12,453,174	·4705
1870	15,148,274	·3895
1871	15,844,152	·3890
1872	16,631,609	·4012
1873	18,200,208	·3497
1874	18,283,547	·3174
1875	17,101,758	·2841
1876	16,948,627	·2462
1877	17,489,770	·2833
1878	19,017,301	·2719
1879	22,590,766	·2373
1880	25,706,586	·2512
1881	27,857,394	·1859
1882	28,693,054	·1905
1883	30,167,119	·1877
1884	26,293,844	·1905
1885	27,543,948	·1718
1886	31,168,744	·1698
1887	34,029,791	·1632
1888	26,244,610	·1883
1889	35,466,042	·1514
1890	37,624,199	·1394
1891	38,524,179	·1343
1892	43,618,569	·0982
1893	42,953,233	·1009
1894	37,916,412	·1024
1895	36,170,339	·0967
1896	43,756,051	·0849
1897	43,711,512	·0828
1898	49,311,030	·0682
1899	51,702,761	·0713
1900	65,433,541	·0512
1901	65,640,837	·0506
1902	72,075,774	·0549
1903	72,283,508	·0559

Average freight rates, grain, Chicago to Buffalo:—(as reported by the Secretary Merchants' Exchange, Buffalo).

Year.	Wheat.	Year.	Wheat.
1881	3·2	1893	1·6
1882	2·5	1894	1·2
1883	3·5	1895	1·9
1884	2·1	1896	1·7
1885	2·0	1897	1·5
1886	3·6	1898	1·5
1887	4·1	1899	2·5
1888	2·7	1900	1·8
1889	2·5	1901	1·6
1890	1·9	1902	1·5
1891	2·5	1903	1·4
1892	2·2		
		Average twenty-three years.	2·3

STATEMENT of the Quantity of Grain and Rolling Freight passed down the St. Lawrence Canals from Côteau Landing to Montreal during the Years 1899, 1900, 1901, 1902 and 1903.

	1899.		1900.		1901.		1902.		1903.	
GRAIN.	Tons.	Bushels.	Tons.	Bushels.	Tons.	Bushels.	Tons.	Bushels.	Tons.	Bushels.
Barley	8,133	338,538	600	24,967						
Buckwheat			11	460						
Corn	174,932	6,176,143	154,815	5,525,845	71,459	2,552,107	11,732	418,791	109,937	3,920,137
Oats	8,357	491,589	16,803	1,005,029	7,831	460,043	3,899	229,262	338	19,865
Pease	237	7,900	142	4,700						
Rye	1,474	52,643	3,925	140,434	5,141	193,607	11,552	395,207	3,495	124,709
Wheat	66,635	2,221,167	126,963	4,215,721	207,403	6,913,434	216,305	7,208,486	175,954	5,837,504
Total	259,768	9,287,980	303,259	10,917,156	291,834	10,119,191	243,488	8,251,746	289,724	9,902,215
ROLLING FREIGHT.										
Flax seed	20,290		3,779		17,208		11,606		6,347	
Flax and hemp			941							
Flour	20,745		8,255		7,290		10,615		9,793	
Furniture			1							
Lard and lard oil	617		1,695				689		18	
Meals	779		448		588					
Oil Cake	2,539				1,255		5,900		9,415	
Meats										
Pork	1,259		418		372				464	
Seeds, all kinds	1,703						283		18	
All other vegetables										
Nails										
Oils										
Sugar	896				28					
Tallow	32		373							
Merchandise	762		696		1		5			
Barrels, empty	420									
Firewood					1,935		180			

Bois de service					459		379			
Articles en bois					46					
Total	50,042		16,606		29,182		29,657		43,674	
Grand total	309,810		319,865		321,016		273,145		256,999	

Comparative Statement of the Commerce through the United States St. Mary's Falls Canal and Canadian Sault Ste. Marie Canal for the Season of 1902 and 1903.

		Traffic for 1903.		Total Traffic for		Increase.	Decrease.
		United States Canal.	Canadian Canal.	Season of 1903.	Season of 1902.	Amount.	Amount.
Vessels	Number.	14,244	4,351	18,595	22,631		4,036
Lockages	"	8,400	3,242	11,642	12,845		1,203
Tonnage registered	Net tons.	22,973,698	4,762,746	27,736,444	32,012,323		4,275,879
" freight	"	29,162,569	5,511,868	34,674,437	35,962,063		1,287,626
Passengers	Number.	22,765	32,410	55,175	59,446		4,271
Coal (hard)	Net tons.	1,030,103	118,602	1,149,005	309,948	839,057	
" (soft)	"	4,908,450	880,178	5,788,628	1,512,321	1,275,307	
Flour	Barrels.	4,284,453	2,808,927	7,093,380	8,916,155		1,812,775
Wheat	Bushels.	29,152,237	32,232,315	61,384,552	76,746,349		15,361,797
Grain (excluding wheat)	"	25,941,198	6,154,448	32,095,646	25,312,513	6,783,133	
Manufactured and pig iron	Net tons.	113,155	80,112	193,267	214,809		21,542
Salt	Barrels.	310,298	144,584	454,882	444,319	10,563	
Copper	Net tons.	105,386	17,491	112,877	120,860		7,983
Iron ore	"	18,971,398	2,683,500	21,654,898	25,300,800		3,645,902
Lumber	Ft. B.M.	972,582,813	30,609,187	1,003,192,000	1,077,932,942		74,740,942
Silver ore	Net tons.				1		1
Building stone	"	20,196	1,104	21,300	40,702		19,402
Unclassified freight	"	416,383	243,456	659,839	742,742		82,903

The United States canal was open to navigation during the season of—

1889	234 days.
1890	228 "
1891	225 "
1892	233 "
1893	219 "
1894	234 "
1895	231 "
1896	232 "
1897	234 "
1898	241 "
1899	231 "
1900	238 "
1901	230 "
1902	256 "
1903	249 "

The Canadian canal was open to navigation during the season of—

1895	87 days.
1896	218 "
1897	238 "
1898	243 "
1899	239 "
1900	238 "
1901	246 "
1902	264 "
1903	256 "

The average number of vessels passing per day through the two canals for the season of 1903 was seventy-four.

R. DEVLIN,

Compiler of Canal Statistics.

OTTAWA,

EXPORTS by Lake from Chicago to Canada during the Season of Navigation in 1903.

(From Report of Board of Trade of Chicago.)

Commodities.	Quantity.	Value.
		$ cts.
Corn ... Bushels.	4,897,652	2,432,825 00
Rye ... "	246,066	125,140 00
Wheat ... "	1,452,427	1,113,448 00
Flour ... Barrels.	7,135	25,840 00
Mill-stuffs ... Sacks.	350	400 00
Grass-seed ... "	500	2,194 00
Oil-cake ... "	12,550	44,000 00
Broom-corn ... Bales.	470	5,766 00
Pork ... Barrels.	4,355	68,785 00
Manufactures of iron ... Tons.	...	1,376 00
Unclassified merchandise ... "	7,890	44,666 00
Total value ...	...	3,864,440 00

GRAIN FREIGHTS BY LAKE—SEASON OF 1903.

The following were the correct rates on Wheat and Corn from Chicago to Buffalo, Ogdensburg, Depot Harbour and Montreal; also to New York by Lake and Erie Canal for each week during the Season of Navigation.

1903.	To Buffalo.		To Ogdensburg.		To Depot Harbour.		To Montreal.		Erie Canal, Buffalo to New York.		* Chicago to New York, Lake and Canal.	
	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
April 11	2	1½	.....	4½	1⅞	1⅜	.....	.....	.....	.....	.....	.....
" 18	2	1⅝	.....	4½	1⅞	1⅜	.....	5⅞	.....	.....	.....	.....
" 25	1⅜	1⅝	.....	4½	1⅞	1⅜	5¾	.....	.....	.....	.....	.....
May 2	1⅜	1½	.....	4	1⅝	1⅜	.....	.....	.....	.....	.....	.....
" 9	1⅜	1½	.....	.....	1⅝	1⅜	.....	.....	.....	.....	.....	.....
" 16	1⅜	1½	.....	4	1⅝	1⅜	.....	5⅞	4	3	5⅝	4½
" 23	1⅜	1½	4	.....	1⅝	1⅜	.....	.....	4½	.....	5⅝	.....
" 30	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	.....	4½	.....	5⅝	.....
June 6	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	.....	4½	.....	5⅝	.....
" 13	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	5⅛	4½	.....	5⅝	.....
" 20	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	.....	4	3½	5⅛	5⅛
" 27	1⅜	1⅜	3½	3½	1⅝	1⅜	.....	.....	4	3½	5⅛	5⅛
July 4	1⅜	1⅜	.....	.....	1⅝	1⅜	4½	.....	4	3½	5⅛	5
" 11	1⅜	1⅜	3½	3½	1⅝	1⅜	4½	.....	4	3½	5⅛	5
" 18	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	4⅝	4¼	4	5⅛	5¼
" 25	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	4⅝	4¼	3½	5⅛	5
Aug. 1	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	4	4¼	3½	5¼	5
" 8	1⅜	1⅜	.....	3	1⅝	1⅜	1¼ & 1	.....	4¼	3½	5¼	5
" 15	1⅜	1	.....	3¼	1⅝	1⅜	1	.....	4¼	3½	5¼	5
" 22	1⅜	1	.....	.....	1⅝	1⅜	1 1/16	.....	4¼	3½	5¼	4¾
" 29	1⅜	1	.....	3¼	1⅝	1⅜	1	.....	4¼	3½	5¼	4¾
Sept. 5	1⅜	1	.....	3¼	1⅝	1⅜	1	.....	4¼	3½	5¼	4¾
" 12	1⅜	1	.....	.....	1⅝	1⅜	1	.....	4¼	3½	5¼	4¾
" 19	1⅜	1	.....	.....	1⅝	1⅜	1	.....	3¾	3½	5¼	4¾
" 26	1⅜	1	.....	.....	1⅝	1⅜	.....	.....	3¾	3½	4¾	4¾
Oct 3	1⅜	1¼	.....	.....	1⅝	1⅜	.....	.....	3¾	3½	4¾	4¾
" 10	1⅜	1¼	.....	.....	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
" 17	1⅜	1¼	.....	.....	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
" 24	1⅜	1¼	.....	3¼	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
" 31	1⅜	1¼	.....	3¾	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
Nov. 7	1⅜	1⅜	.....	4	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
" 14	1⅜	1⅜	.....	.....	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
" 21	1⅜	1⅜	.....	4	1⅝	1⅜	.....	.....	3¾	3½	5¼	4¾
" 28	1⅜	1⅜	.....	.....	2¼	2	.....	.....	3¾	3½	5¼	5¼
Dec. 5	2¼	2¼	.....	.....	2½	2¼	.....	.....	.....	.....	.....	.....
" 12	D.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Exclusive of Buffalo charges.

Lake Freights from Chicago to Buffalo on Wheat and Corn.

Statement showing the dates of the changes of the ruling rates of Lake Freights on Wheat and Corn, from Chicago to Buffalo, during 1903, (as reported by the Secretary of the Merchant's Exchange, Buffalo).

1903.	Wheat, Bushels.	Corn, Bushels.	1903.	Wheat, Bushels.	Corn, Bushels.
	Cts.	Cts.		Cts.	Cts.
April, 1	1 3/4	1 5/8	Aug. 23	1 1/8	1
" 8		1 3/4	Sept. 22		1 1/4
" 15	2	1 1/8	" 29	1 3/8	1 1/4
" 20	1 5/8 to 1 1/2	1 3/8 to 1 1/2	Oct. 10	1 3/8	1 1/4
" 21	1 1/2	1 3/8	" 23		1 3/8
May, 19	1 3/8		" 26		1 1/2
" 20		1 1/4 to 1 3/8	Nov. 9	1 5/8	1 1/2
" 23	1 1/2	1 3/8	" 12		1 3/8
June, 2		1 1/4	" 13		1 1/2
" 4	1 3/8	1 1/4	" 16	1 3/4	1 1/2
" 29		1 1/8 to 1 1/4	" 18		1 1/2
" 30		1 1/4	" 19		1 1/2
July, 14		1 1/8	" 23	2	1 5/8 to 1 3/4
" 31	1 1/4	1 1/8	" 24		2
Aug 6		1	" 27	2 1/2	2 1/4
" 17	1 1/4	1 1/8	Dec. 1	1 7/8	
" 19		1 1/16	" 3	2 to 2 1/8	
" 20		1 to 1 1/8	" 4		2 1/4
" 21		1	" 7		3 to close.

Rates from Milwaukee about the same as from Chicago.

AVERAGE LAKE FREIGHTS.

The following statement shows the average rates of lake freights on wheat and corn between Chicago and Buffalo during each month in the past ten years, the highest and lowest rate on wheat in each year, and the average rate on wheat each year in cents, per bushel :—

(Per Report of the Secretary of Merchants' Exchange, Buffalo.)

	Grain, bushels.	May. Cents.	June. Cents.	July. Cents.	Aug. Cents.	Sept. Cents.	Oct. Cents.	Nov. Cents.
1894	Wheat	1·4	1·2	0·9	1·0	1·4	1·1	1·3
	Corn	1·2	1·1	0·9	0·9	1·3	1·0	1·3
Highest rate, wheat, 1894, 3c.; lowest, $\frac{7}{8}$c.; average for the season, 1·2c.								
1895	Wheat	1·2	1·2	1·1	1·6	2 1	3·0	3·0
	Corn	1·1	1·1	1·0	1·4	1·9	2·9	2 7
Highest rate, wheat, 1895, 3c.; lowest 1c.; average for the season, 1·9c.								
1896	Wheat	1·6	1·5	1·2	1·3	1·4	2·0	2·1
	Corn	1·4	1·3	1·1	1 2	1·2	1·9	1·9
Highest rate, wheat, 1896, 2$\frac{5}{8}$c.; lowest, 1$\frac{1}{4}$c.; average for the season, 1·7c.								
1897	Wheat	1·3	1·2	1·3	1·5	2·0	1·8	1·5
	Corn	1·2	1·1	1·2	1·4	1·8	1·7	1·4
Highest rate, wheat, 1897, 2$\frac{5}{8}$c.; lowest, 1c.; average for the season, 1·5c.								
1898	Wheat	1·3	0·1	0·9	1·2	1·4	2·5	2·3
	Corn	1·2	0·8	0·8	1·1	1·3	2·3	2·1
Highest rate, wheat, 1898, 3$\frac{1}{4}$c.; lowest, 1$\frac{1}{4}$c.; average for the season, 1·5c.								
1899	Wheat	2·0	2 0	2·2	2 5	3·1	3·5	2·5
	Corn	1·8	1·9	2·0	2·3	3·2	3·4	2·3
Highest rate, wheat, 1899, 3$\frac{3}{8}$c.; lowest, 1$\frac{7}{8}$c.; average for the season, 2·5c.								
1900	Wheat	1·8	1 9	2·1	1·6	1·7	1·7	2·9
	Corn	1·6	1·7	2·0	1·5	1·6	1·5	1·8
Highest rate, wheat, 1900, 3c.; lowest, 1$\frac{1}{4}$c.; average for the season, 1·8c.								
1901	Wheat	1·9	1·5	1·6	1·3	1·6	1·3	2·0
	Corn	1·8	1·3	1·4	1·2	1·5	1·2	1·2
Highest rate, wheat, 1901, 2$\frac{1}{2}$c.; lowest, 1$\frac{1}{4}$c.; average for the season, 1·60c.								
1902	Wheat	1·3	1·3	1·2	1·6	1·5	1·7	1·9
	Corn	1·2	1·1	1·1	1·4	1·4	1·6	1·7
Highest rate, wheat, 1902, 2$\frac{1}{2}$c.; lowest, 1$\frac{3}{8}$c.; average for the season, 1·5c.								
1903	Wheat	1·4	1·3	1·3	1·2	1·2	1·4	1·8
	Corn	1·3	1·2	1·2	1·0	1·0	1·3	1·6
Highest rate, wheat, 1903, 2$\frac{1}{4}$c.; lowest, 1$\frac{1}{4}$c ; average for the season, 1·4c.								

Lake Freights from Duluth to Buffalo on Wheat (as reported by the Secretary of the Merchants' Exchange, Buffalo, N.Y.)

The following statement shows the Lake Freight rates on Wheat from Duluth to Buffalo, during the season of 1903 :—

1903.	Wheat, Bushels. Cts.	1903.	Wheat, Bushels. Cts.
April 1	2	Sept. 2	1$\frac{1}{2}$
May 7	1$\frac{3}{4}$	" 4	1$\frac{1}{2}$
" 11	1$\frac{1}{4}$-1$\frac{1}{2}$	" 18	1$\frac{3}{4}$
" 21	1$\frac{1}{8}$-1$\frac{1}{4}$	" 21	2
June 15	1$\frac{1}{4}$	Oct. 3	1$\frac{3}{4}$
" 25	1$\frac{3}{8}$	Nov. 18	2
July 21	1$\frac{1}{2}$	Nov. 20 to Dec. 5	2$\frac{1}{2}$-2$\frac{3}{4}$

In 1885 the range of freights on wheat, Duluth to Buffalo, was 1½ to 5c.; in 1886, 3¼ to 8c.; in 1887, 5 to 8c.; in 1888, 2 to 5c.; in 1889, 2 to 5c.; in 1890, 2 to 5c.; in 1891, 1¼ to 9½c.; in 1892, 2¼ to 4c.; in 1893, 1¼ to 3½c.; in 1894, 1¼ to 3c.; in 1895, 2 to 6c.; in 1896, 1¼ to 3c.; in 1897, 1 to 2½c.; in 1898, 1 to 3½c.; in 1899, 2½ to 6c.; in 1900, 1½ to 3¾c.; in 1901, 1⅛ to 3¾c.; in 1902, 1 to 2¼c., and in 1903, 1⅛ to 2¾c. per bushel.

The first departure by lake, at Duluth in 1903 was April 9; in 1902 was on March 31; in 1901 was on May 6; in 1900 was on April 22; in 1899, on April 29; in 1898, was on April 16; in 1896, on April 22, and in 1895, on April 21. In 1894 season opened on April 19; in 1893, on May 8; in 1892, on April 21; in 1891, on April 30; in 1890, on March 26; in 1889, on April 20; in 1888, on May 12; in 1887, May 4; in 1886, on May 7.

Wheat was shipped at Kingston, Canada, per bushel, during the season of 1887, at 6¼ to 7¾c.; in 1888, at 4 to 5c.; in 1889, at —; in 1890, 5¾, 5½, 4½, 4¼, 4c.; in 1891, during May, 3¾, 3½, 2½c.; during June, 3c.; and on July 25, 2½c.; in 1892, 5c. in April; 5 to 5¼c. in May; 4c. in June; 4½c. in July; 3c. in August; 6 to 6¼c. in October; in 1893, ranged from 5½ to 4½c. in April; 4½ to 4¾c. in May; 4 to 3½c. in June; 2¾ to 3c. in July; 3½ to 3¾c. in September; no figures quoted after that date. In 1894 ranged from 3¼ to 3½c. in May; 3½c. in June; 2½c. in July; 2½ to 3¼c. in August; 4c. in September, and 4¼c. in October. On August 25 and November 3, 1894, wheat to Ogdensburg, at 3¼c. and 4½c., respectively. In 1895, wheat to Kingston from 3c. to 5c. In 1896, wheat to Kingston from 3c. to 5½c.; and in 1897, wheat to Kingston from 3c. to 3½c., according to time of year; 1898 and 1899 not given.

Lake Freights from Toledo to Buffalo on Wheat.

The following statements show the ruling rates of lake freights on wheat from Toledo to Buffalo, during the season of 1903 on the dates specified, as reported by the Secretary Merchants' Exchange, Buffalo.

Date, 1903.	Wheat and Corn per Bushel.	Date, 1903.	Wheat and Corn per Bushel,
	Cts.		Cts.
Opening to April 1	1½	April 1 to July 14	1¼
July 14 to August 1	1⅛	August 1 to close	1¼

The range for 1886 was 1¾ to 3c.; for 1887, 2¼ to 3c.; for 1888, 1½ to 2⅛c.; for 1889, 1¾ to 2c.; for 1890, 1½ to 2c.; for 1891, 1 to 3c.; for 1892, 1½ to 2½c.; for 1893, 1 to 2c.; for 1894, 1 to 2c.; for 1895, 1 to 2¼c.; for 1896, 1¼ to 1¾c.; for 1897, 1 to 1¼c.; for 1898, 1 to 1½c.; for 1899, 1½ to 2c.; for 1900, 1½ to 2c.; for 1901, 1¼ to 1½c.; for 1902, 1⅛ to 2c., and for 1903, 1⅛ to 1½c. per bushel.

From Toledo to Ogdensburg, wheat and corn shipped at 6 to 7c. in 1887; at 4½ to 6c. for wheat and 5c. for corn in 1888; and 5 to 5⅞c. for wheat in 1889 per bushel. From Toledo, on October 8, 1887, corn shipped to Kingston at 3½c., and on November 12, at 4½c. per bushel. In 1888, corn Toledo to Kingston, 4¼ to 3c.; and wheat at 3½ to 3c. per bushel. In 1889, wheat, Toledo to Kingston, 3c.; and in 1891, rye, Toledo to Kingston at 3c. per bushel. From Toledo, on June 2, 1887, wheat shipped to Montreal by propeller at 6½c.; on June 14, corn at same price; but on September 26, the rate on corn was only 5c. per bushel. In 1888, corn, Toledo to Montreal, at 6 to 5¾c. and wheat at 5½c. per bushel. From 1889 to 1899, no shipments to Montreal or other places in Canada reported.

SESSIONAL PAPER No. 20

Canal Freight from Buffalo to New York.

The following shows the changes in the ruling rates of freight to New York from Buffalo, on the days specified in 1903 (as reported by the Secretary, Merchants' Exchange, Buffalo).

Date, 1903.	Wheat, Bushels.	Corn, Bushels.	Date, 1903.	Wheat. Bushels.	Corn, Bushels.
	Cts.	Cts.		Cts.	Cts.
May 2	4	.....	July 15	4¼	3⅞
May 15	4¼	.....	September 16	4	3⅝
June 11	4	3¾	" 19	3⅞	3½
July 2	4¼	4	" 24 to close	3¾	3⅝

The freight on oats varied from 3 to 2⅞c. per bushel. Pine lumber, per 1,000 feet, was carried from Buffalo to Tonawanda to New York as follows: Opened at $1.50; June, $1.50; July, $1.50; August, $1.75; September, $1.75; October, $1.75 to close $1.75. Rates to Albany opened $2; June, $2; July, $2; August, $2.25; September, $2.25; October, $2.25 to close $2.25.

AVERAGE CANAL FREIGHTS.

BUFFALO TO NEW YORK.

The following statement shows the average rates of canal freights on wheat and corn between Buffalo and New York during each month in the past ten years, and the highest and lowest rates on wheat and average rate on wheat in each :—

(Reported by Sec. Merchants' Exchange, Buffalo.)

	Grain.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
		Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
1894	Wheat	3·1	2·9	3·3	3·4	3·6	2·9	3·0
	Corn	2·8	2·6	3·0	3·1	3·3	2·6	2·7
Highest rate, wheat, 1894, 4c.; lowest, 3·6c.; average for the season, 3·2c.								
1895	Wheat	1·9	1·7	2·0	2·0	2·1	2·5	2·7
	Corn	1·7	1·5	1·7	1·7	2·0	2·2	2·5
Highest rate, wheat, 1895, 3c.; lowest, 1·9c.; average for the season, 2·2c.								
1896	Wheat	3·7	3·7	3·7	3·7	3·7	3·7	3·8
	Corn	3·5	3·5	3·5	3·5	3·5	3·5	3·6
Highest rate, wheat, 1896, 4c.; lowest, 3·1c.; average for the season, 3·7c.								
1897	Wheat	2·6	2·2	2·3	2·5	3·3	3·1	3·5
	Corn	2·2	1·8	2·0	2·2	2·8	2·6	3·0
Highest rate, wheat, 1897, 3·5c.; lowest, 2c.; average for the season, 2·8c.								
1898	Wheat	3·0	2·9	2·8	2·7	2·6	3·0	3·0
	Corn	2·5	2·3	2·4	2·1	2·2	2·6	2·6
Highest rate, wheat, 1898, 3·4c.; lowest, 2·5c.; average for the season, 2·8c.								
1899	Wheat	2·5	2·7	2·4	2·5	2·5	3·6	4·2
	Corn	2·3	2·3	2·1	2·1	2·2	3·0	3·5
Highest rate, wheat, 1899, 4·5c.; lowest, 2·5c.; average for the season, 3c.								
1900	Wheat	2·4	2·2	2·3	2·3	2·2	2·7	3·5
	Corn	2·1	2·0	2·1	2·0	2·0	2·4	3·0
Highest rate, wheat, 1900, 3½c.; lowest, 2c.; average for the season, 2·5c.								
1901	Wheat	3.4	3·2	3·2	3·2	3·3	4·0	4·1
	Corn	2·7	2·8	2·8	2·9	3·1	3.7	3·8
Highest rate, wheat, 1901, 4⅜c.; lowest, 3¼c.; average for the season, 3·5c.								
1902	Wheat	4·0	3·8	3·3	3·3	3·8	4·0	4·1
	Corn	3·6	3·4	3·1	3·1	3·5	3·7	3 8
Highest rate, wheat, 1902, 4½c.; lowest, 3⅜c.; average for the season, 3·8c.								
1903	Wheat	4·1	4·1	4·2	4·2	4·0	3·7	3·7
	Corn	3·7	3·7	3·8	3.8	3·6	3 3	3·3
Highest rate, wheat, 1903, 4¼c.; lowest, 3¾c.; average for the season, 4c.								

Note.—Canal free of tolls since 1882.

FREIGHT, TOLLS, ELEVATING AND STORAGE RATES COMPARED.

The following statement shows the receipts of grain and flax seed at Buffalo, the average canal freight on wheat, and the tolls on wheat to New York, and the elevating and storage rates at Buffalo for a series of years (as reported by Secretary, Merchants' Exchange, Buffalo) :—

Year.	Grain received.	Average Canal Freight on Wheat.	Tolls on Wheat.	Elevating, including Storage.
	Bush.	Cts.	Cts.	Cts.
1870	32,208,039	11·2	3·1	1¼
1871	61,319,313	12·6	3·1	1¼
1872	58,703,666	13·0	3·1	1¼
1873	65,498,955	11·4	3·1	1¼
1874	55,660,198	10·0	3·1	1¼
1875	52,833,451	7·9	2·0	1
1876	44,207,121	6·6	2·0	1
1877	61,822,292	7·4	1·0	1
1878	78,828,443	6·0	1·0	1
1879	75,089,768	6·8	1·0	1
1880	105,133,009	6·5	1·0	1
1881	56,389,827	4·7	1·0	½
1882	51,501,503	5·4	1·0	½
1883	65,722,080	4·9	None.	½
1884*	58,011,800	4·2	do	½
1885*	52,671,090	3·8	do	½
1886*	75,570,850	5·0	do	½
1887*	87,073,570	4·6	do	½
1888*	73,977,390	3·4	do	½
1889*	92,290,550	4·8	do	½
1890*	91,994,680	3·8	do	½
1891*	135,315,510	3·5	do	½
1892*	138,872,560	3·5	do	½
1893*	140,796,410	4·6	do	½
1894*	105,435,577	3·2	do	½
1895*	121,225,497	2·2	do	½
1896*	172,474,664	3·7	do	½
1897*	204,964,103	2·8	do	½
1898*	221,383,945	2·8	do	½ to 0
1899*	153,393,184	3·0	do	½
1900*	157,655,968	2·5	do	½
1901	132,646,828	3·5	do	½
1902	124,624,386	3·8	do	½
1903	140,438,822	4·0	do	½

NOTE.—Prior to 1870 tolls 6·21 cents per bushel, and the elevating charge 2 cents per bushel.

* Including flax seed.

AVERAGE FREIGHT CHARGES PER BUSHEL.

For the transportation of Wheat and Corn from Chicago to New York for a series of years.

(From Report of Board of Trade, Chicago.)

Year.	Corn.			Wheat.		
	By lake and canal.	By lake and rail.	By all rail.	By lake and canal.	By lake and rail.	By all rail.
	$	$	$	$	$	$
1858	·127	.....	·3619	·1550	.....	·3861
1859	·1570	.....	·3248	·1663	.....	·3480
1860	*a* ·0833	.....	·3248	*a* ·095	.....	·3480
1861	*a* ·1062	.....	·3881	*a* ·1210	.....	·4158
1862	*a* ·0957	.....	·4480	*a* ·1062	.....	·4800
1863	*a* ·063	.....	·4592	*a* ·072	.....	·4920
1864	*a* ·09	.....	·5600	*a* ·0952	.....	·60
1865	*a* ·0864	.....	·4188	*a* ·0894	.....	·4488
1866	*a* ·1075	.....	·4312	*a* ·1377	.....	·4620
1867	*a* ·0511	.....	·4176	*a* ·08	.....	·4475
1868	*a* ·0604	.....	·3532	*a* ·0802	.....	·3784
1869	*a* ·0584	·2355	·3320	*a* ·0651	·2520	·3557
1870	*a* ·16	·2220	·28	*a* ·0677	·2250	·30
1871	*a* ·0754	·2372	·2968	*a* ·0687	·2542	·3180
1872	*a* ·1072	·2660	·3266	*a* ·1110	·2950	·3499
1873	*a* ·0816	·2298	·2893	*a* ·0917	·2461	·3102
1874	*a* ·0382	·1388	·2450	*a* ·0400	·1709	·2625
1875	*a* ·034	·1303	·2240	*a* ·0378	·1389	·2400
1876	*b* ·0875	·1079	·1574	*b* ·0982	·1136	·1686
1877	*b* ·0959	·1406	·1890	*b* ·1109	·1546	·2050
1878	*b* ·0883	·1053	·1652	*b* ·0996	·1209	·1770
1879	*b* ·1049	·1220	·1456	*b* ·1187	·1313	·1774
1880	*b* ·1341	·1443	·1748	*b* ·1313	·1580	·1980
1881	*b* ·0777	·0942	·1340	*b* ·0867	·1049	·1440
1882	*b* ·0672	·1028	·1350	*b* ·0723	·1091	·1447
1883	*b* ·0803	·11	·1512	*b* ·0901	·1163	·1620
1884	*b* ·0655	·085	·1232	*b* ·07	·10	·1320
1885	*b* ·063	·0801	·1232	*b* ·0654	·0902	·1320
1886	*b* ·0845	·1120	·14	*b* ·0910	·12	·1500
1887	*b* ·0850	·1120	·1470	*b* ·0950	·12	·1575
1888	*b* ·0671	·1026	·1354	*b* ·0705	·1114	·1450
1889	*b* ·0632	·0819	·126	*b* ·0692	·0897	·1500
1890	*b* ·0593	·0732	·1136	*b* ·0676	·0852	·1430
1891	*b* ·0632	·0753	·1400	*b* ·0695	·0857	·1500
1892	*b* ·0595	·0721	·1296	*b* ·0645	·0759	·1380
1893	*b* ·0718	·0797	·1365	*b* ·0766	·0848	·1463
1894	*b* ·0493	·0650	·1232	*b* ·0511	·0700	·1320
1895	*b* ·0450	·0640	·1029	*b* ·0486	·0696	·1189
1896	*b* ·0575	·0615	·1050	*b* ·0619	·0661	·1200
1897	*b* ·0453	·0692	·1143	*b* ·0522	·0742	·1250
1898	‡ ·0381	·0441	·0980	‡ ·0445	·0491	·1200
1899	‡ ·0508	·0583	·1008	‡ ·0581	·0663	·1160
1900	‡ ·0407	·0472	·0919	‡ ·0449	·0510	·0996
1901	‡ ·0461	·0516	·0921	‡ ·0511	·0554	·0988
1902	‡ ·0483	·0551	·0994	‡ ·0526	·0589	·1062
1903	‡ ·0485	·0578	·1054	‡ ·0540	·0637	·1129

a To Buffalo only. *b* Including Buffalo charges and tolls. ‡ Exclusive of Buffalo charges.

FOREIGN FREIGHT RATES.

ANNUAL average Freight Rates on Grain, Flour and Provisions (per 100 lbs.) from Chicago to European Ports, by all Rail to Sea-board and thence by steamers.

Shipped to	Articles.	1903.	1902.	1901.	1900.	1899.
		$	$	$	$	$
Liverpool	Grain	·2268	·2085	·2147	·2498	·2972
"	Sacked flour	·2519	·2350	·2300	·2790	·3012
"	Provisions	·4190	·3625	·3600	·4884	·4050
Glasgow	Grain	·2443	·2175	·2410	·3098	·3235
"	Sacked flour	·2538	·2275	·2438	·3156	·3125
"	Provisions	·4688	·4188	·4516	·5531	·4469
London	Grain	·2356	·2175	·2323	·3110	·3060
"	Sacked flour	·2519	·2400	·2550	·3501	·3350
"	Provisions	·4406	·3906	·4475	·5587	·4414
Antwerp	"	·4969	·4150	·4625	·5109	·4750
Hamburg	"	·4700	·3900	·4400	·5000	·4600
Amsterdam	"	·4200	·4000	·4500	·5100	·4700
Rotterdam	"	·4200	·4000	·4500	·5100	·4700
Copenhagen	"	·4969	·4200	·4775	·5531	·5172
Stockholm	"	·5250	·4500	·5325	·6450	·6297
Stettin	"	·4969	·4200	·4775	·5531	·5172
Bordeaux	"	·5625	·5125	·5425	·6412	·5912

LAKE FREIGHTS ON COAL FROM BUFFALO TO CHICAGO AND OTHER PORTS.

The following statement shows the average freight rate on Coal per net ton, in cents, from Buffalo to the ports named, during the seasons of 1902 and 1903.

(Buffalo Merchants' Exchange.)

	1903.	1902.
Freight on hard Coal, Buffalo to Chicago, per ton	49	48
" " Milwaukee "	49	54
" " Duluth "	38	43

TOTAL VALUES of Merchandise received from British North America for Immediate Transit across United States Territory, for Immediate Transhipment in Ports of the United States to British North America, and so shipped, during each Year from 1873 to 1903, inclusive.

YEAR ENDING JUNE 30.	COUNTRIES FROM WHICH RECEIVED. — British North America.					COUNTRIES TO WHICH SHIPPED. — British North America.				
	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, Ontario, Manitoba and the North-west Territories.	British Columbia.	Newfoundland and Labrador.	Total.	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, Ontario, Manitoba and the North-west Territories.	British Columbia.	Newfoundland and Labrador.	Total.
	$	$	$	$	$	$	$	$	$	$
1873	495,289	12,894,164	5,240	.....	13,394,693	5,282,290	21,320,174	181,720	.....	26,784,184
1874	449,655	13,616,344	97,691	.....	14,163,690	7,150,036	19,843,169	317,534	.....	27,310,739
1875	443,570	17,342 933	256,074	.....	18,042,577	8,999,596	20,283,639	517,060	.....	29,800,295
1876	261,443	22,134,275	195,047	1,137	22,591,902	9,102,600	14,658,358	658,836	94	24,419,888
1877	160,658	12,092,619	218,418	.....	12,471,695	2,879,422	15,551,238	544,018	2,475	18,977,153
1878	163,978	11,627,114	412,966	.....	12,204,058	951,268	11,436,470	524,013	934	12,912,685
1879	194,129	11,606,832	280,079	55	12,081,095	889,539	11,520,877	476,824	2,347	12,889,587
1880	215,131	16,782,315	137,271	.....	17,134,717	1,643,716	14,866,663	531,436	288	17,042,103
1881	171,383	16,758,108	72,555	.....	17,002,046	1,778,836	20,857,827	719,268	333	23,356,264
1882	164,990	28,265,083	113,018	87	28,543,178	2,732,665	34,005,845	855,784	1,190	37,595,484
1883	561,791	29,204,031	36,973	25	29,802,820	2,455,557	35,878,389	971,307	7,335	39,312,568
1884	656,233	12,574,953	188,041	.....	13,419,227	1,740,900	19,717,466	1,475,833	5,186	22,939,385
1885	933,806	12,280,483	308,691	633	13,523,613	1,635,442	16,448,942	1,615,293	781	19,700,458
1886	1,165,973	9,303,864	359,104	32,079	10,861,020	2,040,298	16,369,429	1,825,178	6,174	20,241,079
1887	1,684,730	9,606,175	213,816	.....	11,504,721	1,621,748	19,930,296	635,841	70	22,187,955
1888	1,525,048	6,417,701	372,934	27,134	8,542,817	1,781,028	13,459,169	370,322	1,137	13,611,656
1889	2,596,233	8,355,178	294,859	89,853	11,336,123	2,484,787	18,993,957	665,527	2,704	22,146,975
1890	3,070,657	12,449,772	306,897	174,584	16,001,910	5,277,210	21,140,198	913,106	4,690	27,335,204
1891	3,859,079	15,340,945	422,806	187,640	19,780,470	5,605,614	21,695,992	547,144	34,273	27,883,023
1892	4,393,062	19,005,704	201,373	328,116	23,928,255	2,079,783	24,189,181	428,188	6,962	26,704,114
1893	1,009,597	16,404,425	89,565	381,986	17,885,573	2,052,357	20,232,400	409,055	26,289	22,720,111
1894	1,070,676	15,649,881	348,069	273,467	17,342,093	1,831,417	17,880,688	463,471	6,640	20,182,216
1895	1,199,782	17,774,108	411,557	236,415	19,621,862	1,834,745	19,320,714	558,991	7,844	21,722,294
1896	1,118,185	18,038,931	582,469	404,020	20,143,605	1,572,783	19,441,279	772,586	1,768	21,788,416
1897	1,118,055	22,497,151	611,322	367,295	24,593,823	1,682,538	17,660,211	1,312,797	8,130	20,663,676
1898	1,440,950	35,596,039	1,744,289	555,706	39,336,984	1,536,413	22,400,622	2,294,356	19,247	26,250,638
1899	1,618,399	30,673,265	3,708,928	561,129	36,561,721	1,215,518	19,605,819	4,686,559	27,147	25,535,043
1900	2,002,264	37,657,936	3,914,668	553,031	44,127,899	1,245,771	27,452,333	2,730,612	49,555	31,478,271
1901	1,788,641	38,382,558	4,070,940	503,970	44,746,109	1,161,875	24,634,780	4,687,000	71,924	30,555,579
1902	2,206,590	54,332,135	4,531,932	639,241	61,709,898	5,086,469	27,049,441	5,441,234	31,522	37,608,666
1093	2,191,174	55,023,403	3,490,180	782,619	61,487,376	1,268,469	32,290,433	1,949,975	18,849	35,527,726

TOTAL VALUE of Merchandise received from the Principal and other Foreign Countries for Immediate Transit across United States Territory or for Immediate Transhipment in Ports of the United States to other Foreign Countries, and so shipped, for each Year from 1868 to 1903, inclusive.

Year ending June 30.	Countries from which Received.						Countries to which Shipped.						Total Value of Merchandise received and shipped.
	Great Britain and Ireland.	Germany.	British North American Possessions.	Mexico.	Cuba.	Other Countries.	Great Britain and Ireland.	Germany.	British North American Possessions.	Mexico.	Cuba.	Other Countries.	
	$	$	$	$	$	$	$	$	$	$	$	$	$
1868 ...	10,664,576	132,074	4,864,209	14,967	4,263,621	1,576,157	2,025,023	3,212,123	14,375,419	481,643	116,521	1,304,875	21,516,604
1869....	10,891,698	150,382	5,852,678	60,715	2,373,474	1,767,037	2,693,525	1,547,602	15,033,821	448,300	72,875	1,299,861	21,095,984
1870....	10,210,455	302,806	7,215,973	103,977	3,309,227	2,049,422	2,946,053	2.116,249	16,689,037	321,331	135,915	983,275	23,191,860
1871....	13,473,915	322,110	7,954,060	344,179	1,367,573	1,913,200	4,031,319	1 033,307	18,406,475	346,872	345,224	1,211,840	25,375,037
1872....	17,633,231	227,232	9,276,169	174,104	2,227,422	1,847,162	2,743,494	2 263,819	24,042,790	358,151	179,570	1,797,496	31,385,320
1873....	19,144,815	250,704	13,394,693	286,607	5,737,904	1,284,462	5,144 175	5,622,325	26,784,184	235,113	319,771	1,993,617	40,099,185
1874....	18,832,900	211,907	14,163,690	151,920	4,563,869	926,390	5 391 201	3,866,642	27,310,739	665,214	520,493	1,096,387	38,850,676
1875 ...	18,657,276	325,648	18,042,577	115,527	1,759,308	1,785,947	7,229,912	1,495,285	29,860,295	1,155,004	248,358	757,429	40,686,283
1876....	14,304,197	290,489	22,591,902	226,315	2,962,963	1,686,789	11,791,200	2,958,558	24,419,888	1,129,440	600,061	1,163,508	42,062,655
1877....	13,732,085	337,897	12,471,695	158,852	1,095,451	1,460,793	7,758,501	1,108,298	18,977,153	329,577	306,311	776,933	29,256,773
1878....	10,084,510	378,768	12,204,058	146,822	3,041,957	1,481,033	9,577,050	2,905,230	12,912,685	316,664	319,611	1,305,908	27,337,148
1879....	8,795,310	521,917	12,081,095	222,320	1,954,042	1,521,153	8,175,951	2,252,572	12,889,587	330,968	174,757	1,272,032	25,095,867
1880....	10,311,139	620,704	17,134,747	239,655	3,606,099	1,942,405	10,856,579	3,658,477	17,042,103	300,148	224,848	1,775,594	33,857,749
1881....	14,898,052	721,344	17,002,046	217,444	2,642,550	2,222,122	9,122,079	2,729,246	23,356,264	671,008	177,340	1,648,121	37,704,048
1882....	18,911,637	755,560	28,543,178	380,100	5,662,926	3,812,058	11,592,806	5,336,361	37,595,484	800,025	319,257	2,421,526	58,065,459
1883....	20,242,222	1,149,195	29,802,820	281,309	3,126,069	4,276,712	11,089,865	2,758,994	39,312,568	2,282,473	352,552	3,081,875	58,878,327
1884....	14,038,694	948,901	13,419,227	408,124	3,655,568	4,345,878	5,288,389	2,960,488	22,939,385	2,748,431	221,061	2,656,635	36,814,392
1885....	11,064,186	1,140,548	13,523,613	308,293	4,853,354	3,545,544	7,235,519	3,771,524	19,700,458	1,262,515	119,376	2,346,146	34,435,538
1886....	13,142,644	1,462,414	10,861,020	216,078	6,797,879	4,558,229	8,510,097	3,803,566	20,241,079	1,279,399	452,700	2,751,423	37,038,264
1887....	17,977,200	1,670,952	11,504,721	111,635	6,780,853	4,720,760	10,052,219	4,353,992	22,187,955	2,002,476	608,121	3,561,358	42,766,121
1888....	13,707,240	1,817,511	8,342,817	120,497	4,820,846	4,534,298	6,853,195	2,551,043	15,611,656	3,766,180	563,539	3,997,596	33,343,209
1889....	19,080,647	2,582,456	11,336,123	296,654	9,054,736	5,052,610	9,233,659	4,581,064	22,146,975	4,781,110	892,158	5,768,287	47,403,253
1890....	20,664,427	2,735,546	16,002,384	639,050	9,759,256	5,898,763	10,656,465	5,097,434	27,335,678	4,944,149	1,215,399	6,450,301	55,699,426
1891....	20,879,851	2,819,238	19,780,470	565,338	6,977,901	6,475,119	11,968,808	3,640,940	27,883,023	5,052,318	966,851	7,985,977	57,497,917
1892....	21,334,783	2,930,571	23,928,255	1,383,455	11,054,445	8,936,228	20,141,862	6,995,419	26,704,114	4,953,911	1,472,980	9,299,451	69,567,737
1893. ..	20,387,339	3,466,885	17,885,573	1,652,200	10,131,171	14,426,669	18,511,287	7,986,637	22,720,111	4,607,549	2,034,761	12,089,492	67,949,837
1894....	19,641,622	3,717,740	17,342,093	1,858,367	9,916,742	19,031,011	18,394,865	11,154,933	20,182,216	4,543,455	2,586,919	16,645,187	71,507,575
1895....	18,531,083	4,122,899	19,621,862	2,515,091	10,420,277	10,465,981	20,562,325	6,684,735	21,722,294	4,512,293	1,951,985	10,243,561	65,677,193
1896....	19,420,751	3,460,489	20,143,605	1,797,161	11,668,243	15,272,521	20,022,263	7,942,844	21,788,416	5,210,607	1,890,705	12,907,932	69,762,770
1897....	17,513,324	3,183,390	24,593,823	1,903,924	9,589,820	13,275,822	24,809,259	5,333,860	20,663,676	5,320,563	2,058,454	11,874,291	70,060,103
1898....	18,931,226	3,775,038	39,336,984	2,625,521	4,763,587	11,587,069	33,276,696	3,807,811	26,250,638	5,543,843	1,728,780	10,411,607	81,019,375
1899....	16 594,043	4,069,828	36,561,721	3,519,942	8,372,450	10,910,462	29,695,600	5,711,338	25,535,043	5,669,214	2,760,086	10,657,165	80,028,446
1900....	23,152,099	3,915,766	44,127,899	4,245,695	9,316,066	13,793,937	37,383,450	6,488,502	31,478,271	6,965,660	3,484,521	12,751,058	98,551,462
1901....	21,771,394	4,681,613	44,746,109	4,659,259	15,680,902	14,821,842	37,506,242	14,204,010	30,555,579	8,110,116	3,577,929	12,407,243	106,361,119
1902....	22,782,353	4,826,666	61,709,898	5,303,403	10,598,013	13,305,527	50,307,083	6,701,903	37,608,666	8,083,313	3,128,575	14,696,320	118,525,860
1903....	22,583,099	5,564,526	61,487,376	6,681,984	10,190,906	15,478,227	51,137,598	6,851,163	35,527,726	9,577,354	3,080,344	15,811,933	121,986,118

FOREIGN CARRYING TRADE.

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, in American vessels and in foreign vessels during each Fiscal Year, from 1857 to 1903 inclusive with the percentage carried in American vessels (coin and bullion are included from 1857 to 1879 inclusive), as method of transportation of specie and merchandise cannot be separately stated.

Year ending June 30.	Imports.			Exports.			Imports and Exports.				Percentage carried in American vessels.
	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	Total.	
	$	$	$	$	$	$	$	$	$	$	
1857		259,116,170	101,773,971		251,214,857	111,745,825		510,331,027	213,519,796	723,850,823	70·5
1858		203,700,016	78,913,134		243,491,288	81,153,133		447,191,304	160,066,267	607,257,571	73·7
1859		216,123,428	122,644,702		249,617,953	107,171,569		465,741,381	229,816,211	695,557,592	66·9
1860		228,164,855	134,001,399		279,082,902	124,039,394		507,247,757	255,040,793	762,288,550	66·5
1861		201,544,055	134,106,098		179,972,733	69,372,180		381,516,788	203,478,278	584,995,066	65·2
1862		92,274,100	113,497,629		125,421,318	104,517,667		217,695,418	218,015,296	435,710,714	50·0
1863		109,744,580	143,175,340		132,127,891	199,880,691		241,872,471	343,056,031	584,928,502	41·4
1864		81,212,077	248,350,818		102,849,409	237,442,730		184,061,486	485,793,548	669,855,034	27·5
1865		74,385,116	174,170,336		93,017,756	262,839,588		167,402,872	437,010,124	604,412,996	27·7
1866		112,040,395	333,471,763		213,671,466	351,754,928		325,711,861	685,226,691	1,010,938,552	32·2
1867		117,209,536	300,622,035		180,625,368	280,708,368		297,834,904	581,330,403	879,165,307	33·9
1868		122,965,225	248,659,583		175,106,348	301,886,491		297,981,573	550,546,074	848,527,647	35·1
1869		136,802,024	300,512,231		153,154,748	285,979,781		289,956,772	586,492,012	876,448,784	33·1
1870		153,237,077	309,140,510		199,732,324	329,786,978		352,969,401	638,927,488	991,896,889	35·6
1871	15,187,354	163,285,710	363,020,644	7,798,156	190,378,462	392,801,932	22,985,510	353,664,172	755,822,576	1,132,472,258	31·2
1872	17,635,681	177,286,302	445,416,783	10,015,089	168,044,799	393,929,579	27,650,770	345,341,101	839,346,362	1,212,328,233	28·5
1873	17,070,548	174,739,834	471,806,765	10,799,430	171,566,758	494,915,886	27,869,978	346,306,592	966,723,651	1,340,899,221	25·8
1874	14,513,335	176,027,778	405,320,135	8,509,205	174,424,216	533,885,971	23,022,540	350,451,994	939,206,106	1,312,680,640	26·7
1875	13,083,859	157,872,726	382,949,568	7,304,356	156,385,066	501,838,949	20,388,235	314,257,792	884,788,517	1,119,434,544	25·8
1876	12,148,667	143,389,704	321,139,500	6,324,487	167,686,467	492,215,187	18,473,154	311,076,171	813,354,987	1,142,904,312	27·3
1877	10,697,640	151,834,067	329,565,833	6,767,170	164,826,214	530,354,703	17,464,810	316,660,281	859,920,536	1,194,045,627	26·5
1878	12,965,999	146,499,282	307,407,565	7,511,365	166,551,624	569,583,564	20,477,364	313,050,906	876,991,129	1,210,519,399	25·9
1879	11,983,823	143,590,353	310,499,599	7,439,862	128,425,339	600,769,633	19,423,685	272,015,692	941,269,232	1,202,708,609	22·6
1880	15,142,165	149,317,368	503,494,913	5,838,928	109,029,209	720,770,521	20,981,393	258,346,577	1,224,265,434	1,503,593,404	17·18
1881	17,193,213	133,631,146	491,840,269	8,259,308	116,955,324	777,162,714	25,452,521	250,586,470	1,269,002,983	1,545,041,974	16·22
1882	22,854,946	130,266,826	571,517,802	12,118,371	96,962,919	641,460,967	34,973,317	227,229,745	1,212,978,769	1,475,181,831	15·40
1883	23,063,018	136,002,290	564,175,576	25,089,811	104,118,210	694,331,348	48,092,892	240,420,500	1,258,506,924	1,547,020,316	15·54
1884	20,140,294	135,046,207	512,511,192	26,573,774	98,652,828	615,287,007	46,714,068	233,699,035	1,127,798,199	1,408,211,302	16·60
1885	21,149,476	112,864,052	443,513,801	24,183,299	82,001,691	636,004,765	45,332,775	194,865,743	1,079,518,566	1,319,717,084	14·76
1886	24,555,683	118,942,817	491,937,636	19,144,667	78,406,680	581,973,477	43,700,350	197,349,503	1,073,911,113	1,314,960,966	15·01
1887	27,562,059	121,365,493	543,392,216	21,389,666	72,991,253	621,802,292	48,951,725	194,356,746	1,165,194,508	1,408,502,979	13·80

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, &c.—*Concluded.*

Year ending June 30.	IMPORTS.			EXPORTS.			IMPORTS AND EXPORTS.				Percentage carried in American vessels.
	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	Total.	
	$	$	$	$	$	$	$	$	$	$	
1888	32,209,459	123,525,298	568,222,357	22,147,368	67,332,175	606,474,964	54,356,827	190,857,473	1,174,697,321	1,419,911,621	13·44
1889	38,227,861	120,782,910	586,120,881	28,436,517	83,022,198	630,942,660	66,664,378	203,805,108	1,217,063,541	1,487,533,027	13·70
1890	40,621,361	124,948,948	623,740,100	32,949,902	77,502,138	747,376,644	73,576,263	202,451,086	1,371,116,744	1,647,139,093	12·29
1891	40,932,755	127,471,678	676,511,763	31,923,439	78,968,047	773,589,324	72,856,194	206,439,725	1,450,101,087	1,729,397,006	11·94
1892	39,726,595	139,139,891	648,535,976	33,220,629	81,033,844	916,023,675	72,947,224	220,173,735	1,564,559,651	1,857,680,610	11·85
1893	44,121,094	127,095,434	695,184,394	43,862,947	70,670,073	733,132,174	87,984,041	197,765,507	1,428,316,568	1,714,066,116	12·2
1894	29,623,095	121,561,193	503,810,334	49,221,427	73,707,023	769,212,122	78,844,522	195,268,216	1,273,022,456	1,547,135,194	13·3
1895	33,201,988	108,229,615	590,538,362	49,902,754	62,277,581	695,357,830	83,104,742	170,507,196	1,285,896,192	1,589,508,130	11·7
1896	35,535,079	117,299,074	626,890,521	61,131,125	70,392,813	751,083,000	96,666,204	187,691,887	1,377,973,521	1,662,331,612	12·00
1897	35 812,620	109,133,454	619,784,338	65,082,305	79,441,823	905,969,428	100,894,925	189,075,277	1,525,753,766	1,815,723,968	11·00
1898	30,427,784	93,535,867	492,086,003	73,283,704	67,792,150	1,090,406,476	103,711,488	161,328,017	1,582,492,479	1,847,531,984	9·30
1899	33,424,821	82,050,118	581,673,550	83,870,907	78,562,088	1,064,590,307	117,295,728	160,612,206	1,646,263,857	1,924,171,791	8·9
1900	44,412,509	104,304,940	701,223,735	110,483,141	90,779,252	1,193,220,689	154,895,650	195,084,192	1,894,444,424	2,244,424,266	9·3
1901	47,100,814	93,0[illegible]5,493	683,015,858	111,900,931	84,343,122	1,291,520,938	159,001,745	177,398,615	1,974,536,796	2,310,937,156	8·2
1902	56,366,711	102,[illegible],002	744,766,235	123,824,337	83,631,985	1,174,263,079	180,191,048	185,819,987	1,919,029,314	2,285,040,349	8·8
1903	66,208,195	123,666,832	835,844,210	138,851,301	91,028,200	1,190,262,178	205,059,496	214,695,032	2,026,106,388	2,445,860,916	9·1

NOTE.—1. The amounts carried in cars and other land vehicles, were not separately stated prior to July 1, 1870. 2. Exports are stated in mixed gold and currency values from 1862 to 1879, inclusive.

SESSIONAL PAPER No. 20

STATEMENT showing the Total Values of Foreign Merchandise transported in the In-Transit and Transhipment Trade of the United States with the British North American Possessions, during each year from 1871 to 1903.

Year ending June 30.	Received for transit and transhipment from British North American Possessions.			Shipped in transit to or transhipment for British North American Possessions.		
	By Land.	By Water.	Total.	By Land.	By Water.	Total.
	$	$	$	$	$	$
1871	6,035,585	1,918,475	7,954,060	15,624,591	2,781,884	18,406,475
1872	8,237,859	1,038,310	9,276,169	19,357,342	4,685,448	24,042,790
1873	11,700,787	1,693,906	13,394,693	20,178,666	6,605,518	26,784,184
1874	12,695,590	1,468,100	14,163,690	20,572 299	6,938,430	27.510,739
1875	16,890,022	1,152,555	18,042,577	23,794,129	6,006,166	29,800,295
1876	21,301,262	1,290,640	22,591,902	19.369,958	5,049,930	24,419,888
1877	10,835.642	1.636,053	12,471,695	17,066,855	1,910,298	18,977,153
1878	10,314,534	1,889,524	12,204,058	11,914,321	998,364	12,912,685
1879	10,098,998	1,982,097	12,081,095	12,030,635	858,952	12,889,587
1880	15,265,177	1,869,570	17,134,747	16,388,673	653,430	17,042.003
1881	15,200,967	1,801.079	17,002,046	22,828,270	527,994	23,356.264
1882	24,665,029	3,878,149	28,543,178	36,613,465	982,019	37,595,484
1883	26,382,370	3,420,450	29,802,820	38,389,318	923,250	39,312,568
1884	13,043,498	375,729	13,419,227	22,120,587	818,798	22,939,385
1885	12,755,686	767,927	13,523,613	19.105,476	594,982	19,700,458
1886	9,593,344	1,267,676	10,861,020	19,428,867	812,212	20,241,079
1887	9,377,041	2,127,680	11,504,721	20,178,365	2,009,590	22,187,955
1888	6,309,024	2,033,793	8,342,817	13,347,876	2,063,780	15,611,656
1889	8,303,171	3,032,952	11,336,123	19,299,966	2,849,263	22,149,229
1890	13,524,298	2,477,612	16,001,910	24,788,152	2,547.052	27,335,201
1891	18,065,925	1,714,545	19,780,470	25,185,706	2,697,317	27,883,023
1892	21,346,413	2,581,842	23,928,255	23,989,746	2,714,368	26,704,114
1893	13,807,662	4,077,911	17,885,573	20,151,432	2,568,679	22,720,111
1894	13,501,664	3,840,429	17,342,093	17,974,332	2,207,884	20,182,216
1895	14,068,922	5,552,940	19,621,862	18,752,226	2,970,068	21,722,294
1896	13,408,578	6,735 027	20,143,605	18,335,373	3,453,043	21,788,416
1897	17,665,422	6.928,401	24,593,823	18,430,841	2,232,835	20 663,676
1898	27,277,049	12,059,935	39,336,984	22,792,971	3,457,667	26,250,638
1899	28,248,759	8,312,962	36,561,721	22,593,761	2,941,282	25,535,043
1900	33,346,150	10,781,749	44,127,899	27,996,981	3,481,290	31,478,271
1901	37,680,071	7,066,038	44,746,109	27,899,903	2,655,676	30,555,579
1902	46,761,353	14,948,545	61,709,898	30,518,576	7,090,090	37,608,666
1903	45,026,422	16,460,954	61,487,376	32,349,527	3,178,199	35,527,726

NOTE.—This movement forms no part of the import and export trade.

C.—Table showing the Tonnage of the undermentioned Articles moved

Years.	Vegetable Food.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Vegetable Food.*
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	71,051	670,534	256,475	99,012	92,309	13,489	99,743
1870	54,978	658,524	193,129	123,191	117,941	19,520	127,727
1871	41,211	748,549	672,057	113,992	129,891	34,563	109,935
1872	20,534	403,903	902,753	120,061	92,959	13,357	120,753
1873	19,307	803,064	637,296	70,586	70,023	30,160	114,735
1874	29,134	772,163	519,203	98,654	59,408	8,215	280,821
1875	17,635	744,293	282,031	104,475	62,717	8,309	86,090
1876	9,290	416,376	365,254	96,494	52,147	19,949	104,783
1877	8,923	448,043	723,458	139,453	66,045	35,948	77,114
1878	5,904	844,555	734,993	89,534	85,029	64,613	88,106
1879	7,164	949,466	621,180	96,144	23,164	59,210	77,071
1880	8,266	966,052	1,156,619	106,247	20,893	26,340	86,673
1881	6,926	444,832	475,823	81,587	30,321	15,484	61,588
1882	9,372	642,215	251,687	96,650	22,180	43,372	53,300
1883	9,047	573,740	522,978	58,787	51,607	95,246	67,595
1884	7,251	790,409	198,216	65,008	52,696	71,462	51,944
1885	6,869	565,922	359,982	64,587	8,234	10,211	47,505
1886	9,005	993,129	354,765	62,854	7,278	3,073	59,782
1887	4,089	936,840	446,617	75,458	35,365	6,717	47,678
1888	3,287	491,419	499,218	41,100	70,315	12,532	49,087
1889	4,429	484,141	592,550	66,110	63,674	36,329	49,663
1890	3,489	353,738	616,702	90,754	48,438	21,657	33,123
1891	3,126	756,101	142,141	71,903	16,362	68,771	33,951
1892	4,879	620,768	150,269	51,596	72,444	4,236	33,807
1893	2,367	1,093,927	252,283	49,651	24,714	6,518	20,656
1894	2,909	903,361	275,377	89,700	100,874	5,288	22,620
1895	2,240	280,550	94,403	77,868	87,839	205	59,400
1896	7,963	408,872	100,227	109,967	197,713	77,210	55,230
1897	3,206	180,035	312,776	100,337	50,345	66,387	31,489
1898	1,854	69,986	364,248	89,906	76,244	7,745	43,044
1899	1,247	282,422	92,670	78,627	93,733	5,931	22,856
1900	1,171	138,302	189,013	63,204	36,435	10,478	34,254
1901	747	214,854	87,392	55,502	88,521	10,326	99,757
1902	1,328	291,938	33,001	75,314	44,678	18,503	24,291
1903	1,075	143,832	191,351	71,837	62,326	12,027	30,153

* Apples, meal all kinds, pease, potatoes.

on all Canals in the State of New York, during a series of thirty-five years.

	Heavy Goods.					
Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1,302,613	137,677	79,652	263,333	1,324,408	183,992	1,989,062
1,295,010	135,930	89,708	266,740	1,558,185	238,802	2,289,365
1,850,198	178,269	100,310	248,709	1,194,037	289,952	2,011,277
1,674,320	161,667	96,996	248,558	1,462,590	377,592	2,347,403
1,745,171	53,363	62,581	216,706	1,625,859	415,968	2,374,477
1,767,598	24,511	82,955	173,590	1,413,162	232,544	1,926,762
1,305,550	36,603	95,305	186,785	1,217,091	283,219	1,819,003
1,064,293	11,691	69,450	114,070	1,036,698	173,530	1,405,439
1,498,984	10,341	58,828	156,918	1,286,881	250,573	1,763,541
1,912,734	8,385	65,642	139,927	889,873	210,078	1,313,905
1,833,399	27,634	99,568	136,021	971,074	314,411	1,548,708
2,371,090	93,613	139,993	144,487	959,342	370,884	1,709,319
1,116,561	78,650	205,005	113,756	1,092,003	337,873	1,827,287
1,118,776	58,921	122,786	108,040	1,228,435	364,361	1,882,543
1,379,000	46,553	47,412	190,392	1,152,849	293,892	1,731,098
1,236,986	28,513	54,471	161,788	954,288	210,610	1,400,670
1,063,310	12,215	38,726	161,272	1,025,941	195,750	1,433,904
1,489,886	10,878	152,030	112,002	857,884	269,914	1,402,708
1,552,764	21,368	224,979	124,054	905,424	243,578	1,539,403
1,166,958	2,596	43,881	106,344	1,219,680	259,269	1,631,770
1,296,896	3,278	78,135	112,100	1,094,897	234,948	1,523,358
1,167,901	5,800	26,804	93,181	830,154	202,072	1,157,291
1,092,355	1,960	36,770	81,232	881,502	215,686	1,217,150
937,999	524	40,073	93,216	832,397	136,612	1,102,822
1,450,116	536	25,204	52,094	741,934	102,275	922,043
1,400,129	267	22,614	70,353	609,368	37,641	740,243
602,505	4,263	59,402	71,334	766,723	144,076	1,045,798
957,182	1,568	74,651	83,309	682,167	89,998	931,692
744,575	5,080	71,117	66,879	646,803	76,311	866,190
653,027	6,288	101,216	85,525	626,616	73,199	892,844
577,486	2,725	69,106	91,068	777,743	205,234	1,145,876
472,857	833	49,036	88,635	809,187	103,514	1,051,205
557,099	7[illegible]9	30,110	100,080	774 538	90,656	996,093
489,053	15	24,077	111,430	567,911	115,983	819,416
512,601	181	21,577	111,955	733,369	101,752	968,834

D.–TABLE showing the total Tonnage of the undermentioned Articles moved Up and Down

Year.	Vegetable Food.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	45,674	313,825	120,599	20,951	.....	904	1,937
1872.....	26,651	239,998	254,902	6,035	7,752	64	2,745
1873.....	30,665	355,847	180,169	8,225	1,194	3	3,777
1874.....	24,019	413,212	181,151	18,871	5,954	513	8,677
1875.....	13,964	253,835	103,749	35,751	3,383	917	6,337
1876	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877.....	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878.....	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879.....	10,710	274,570	144,506	4,655	1,239	440	2,444
1880.....	12,679	242,020	163,738	17,772	477	1,016	1,480
1881.....	9,959	127,832	101,075	24,509	.....	1,844	2,086
1882.....	12,261	215,056	54,799	20,126	611	3,226	403
1883.	13,471	152,794	182,269	10,436	731	1,642	10,983
1884.....	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885.....	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886....	19,474	154,169	219,442	1,595	4,911	564	14,657
1887.....	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888.....	16,983	160,963	194,886	5,906	26,629	811	13,608
1889.....	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890.....	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891.....	13,517	198,658	185,180	8,113	52,959	65,888	28,042
1892.....	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893...	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894..... ...	33,628	270,993	169,233	28,353	27,962	567	60,673
1895.....	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896.....	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897.....	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898.....	5,578	207,647	437,861	12,286	17,502	16,127	23,182
1899.....	11,625	197,732	204,004	2,907	24,037	923	18,460
1900.....	10,968	137,800	163,509	4,035	41,055	3,538	14,815
1901..	18,978	151,586	67,756	7,119	28,485	2,961	14,024
1902..... .	22,282	225,171	67,647	7,418	11,232	4,079	12,963
1903.....	25,998	259,031	210,758	14,656	7,911	4,904	13,994

* Fiscal † Apples, meal all kinds, pease, potatoes.

through the Welland Canal, during a period of thirty-three years, ended Dec. 31, 1903.

	Heavy Goods.						
Total.	Railway Iron.	Other Iron.	Salt.	Iron and Salt having paid full tolls on St. Lawrence Canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	68,064	16,924	91,575	37,153	103,126	58,781	275,623
538,147	26,217	17,141	50,540	44,243	186,932	98,605	3,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	43,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	81,654	378,540
464,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,349
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
527,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
591,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
459,688	567	6,361	1,282	1,318	97,732	26,125	133,385
375,720	.....	8,190	533	4,800	47,392	58,400	119,315
290,909	83	6,094	327	8,773	49,480	99,487	164,244
350,792	64	7,488	.....	15,201	64,014	22,480	109,247
537,252	488	5,407	2,554	45,846	147,884	18,323	220,502

E.—TABLE showing the tonnages of the undermentioned Articles cleared at Buffalo and Tonawanda, for transit through the Erie Canal, for a series of thirty-five years.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.	5,609	490,904	219,874	1,978	63,728	2,150	2,193	786,436	.....	....
1870.	8,258	502,158	165,577	19,944	89,156	10,593	6,906	802,592	2·05	.....
1871.	5,607	570,849	579,709	19,810	106,391	27,622	5,705	1,315,693	67·59	.....
1872.	.....	330,032	866,169	41,515	73,572	5,900	88	1,317,276	67·50	.....
1873.	6	737,167	611,675	8,636	51,615	22,441	634	1,432,174	82·10	.....
1874.	.....	650,161	459,728	3,192	44,079	112	237	1,157,509	47·18	.....
1875.	5,859	695,315	273,006	1,156	36,609	2,242	3,372	1,017,559	29·38	.....
1876.	231	377,317	356,064	6,334	24,488	12,205	4,691	783,331	.....	0·39
1877.	1,710	398,416	709,723	26,351	52,559	27,365	4,976	1,223,100	55·52	.....
1878.	987	775,953	718,714	21,665	69,256	51,064	6,662	1,644,301	109·08	.....
1879.	1,239	892,404	602,171	7,193	14,537	40,471	7,528	1,565,543	99·07	.....
1880.	2,743	897,603	131,857	434	16,154	12,137	4,256	2,065,184	162·06	.....
1881.	1,491	386,605	458,318	86	24,751	107	7,484	878,842	11·75	.....
1882.	1,123	586,019	241,406	1,858	9,046	19,158	6,216	864,826	9·96	.....
1883.	538	535,150	517,219	6,816	47,190	79,010	6,051	1,191,974	51·06	.....
1884.	520	767,784	194,368	4,910	47,060	57,856	4,411	1,078,909	37·18	.....
1885.	323	540,533	356,737	3,317	5,610	6,405	5,427	918,352	14·36	.....
1886.	488	955,851	351,272	6,799	5,180	.....	4,001	1,353,591	72·11	.....
1887.	334	914,152	438,069	15,207	32,907	4,612	44,693	1,449,984	85·64	.....
1888.	534	469,965	494,110	6,589	68,922	10,997	1,717	1,052,834	33·87	.....
1889.	845	457,922	579,526	16,380	61,175	34,167	5,160	1,155,175	46·88	.....
1890.	195	329,531	498,641	58,563	45,202	16,903	4,362	953,397	21·23	.....
1891.	1,071	733,967	137,679	43,779	14,803	66,278	2,594	1,000,171	27·18	.....
1892.	2,485	611,177	141,506	37,570	70,363	3,997	3,472	870.570	10·69	.....
1893.	424	1,086,834	240,767	38,986	21,981	6,156	243	1,395,391	77·43	.....
1894.	327	887,908	265,947	69,707	99,898	5,191	2,123	1.331,101	69·26	.....
1895.	98	271,957	83,611	71,185	85,507	205	15	508,596	.....	35·32
1896.	6,971	402,114	89,726	101,154	194,442	77,162	5,575	877,144	11·53	.....
1897.	1,665	168,870	303,761	88,293	48,591	65,490	11,965	688,635	.....	12 44
1898.	.....	64,760	354,917	85,359	74,336	7,367	20,818	607,557	.....	22·74
1899.	.....	271,848	84,370	72,892	92,919	5,839	.....	527,868	.....	32 89
1900.	620	129,683	184,996	53,472	33,564	10,478	25,621	438,434	.....	44·11
1901.	3	211,317	86,240	45,624	87,357	10,326	32,862	473,729	.....	39·76
1902.	.....	289,207	30,293	50,500	43,162	18,503	5,278	436,943	.....	44·44
1903.	.....	140,508	183,856	47,857	61,060	12,027	510	445,818	.....	43·31

* Apples, meal all kinds, pease, potatoes.

STATEMENT to Table E showing the shipment at Oswego during the same period.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869	7,361	141,360	28,585	66,794	1,113	8,569	14,033	267,815	..	. . .
1870	11,440	115,732	10,120	77,906	3,953	7,402	11,628	238,181	...	11·06
1871	10,043	123,173	70,218	72,675	1,806	6,250	13,259	297,424	11·05	.....
1872	4,773	57,865	27,148	62,172	684	6,751	10,425	169,818	.. .	36·59
1873	4,061	53,361	10,578	46,337	670	6,019	10,739	131,765	.....	50·80
1874	.....	108,288	46,127	77,007	1,103	7,053	3,747	243,325	.....	9·14
1875	1,728	32,690	3,034	75,083	3,308	4,989	5,931	126,763	.....	52·67
1876	967	21,890	1,324	63,336	117	5,703	6,638	99,975	....	62·67
1877	855	28,955	3,308	80,306	316	6,603	6,556	126,899	.....	52·61
1878	1,394	24,171	1,383	50,381	.....	10,598	5,222	93,149	.. ...	65·21
1879	734	25,740	9,268	71,693	....	16,623	3,110	127,168	.....	52·51
1880	951	17,466	15,656	82,743	....	12,598	5,996	135,410	.....	49·43
1881	758	25,352	8,064	62,793	206	14,444	4,027	115,638	.....	56·82
1882	813	20,274	4,401	70,862	416	22,265	7,773	126,804	.....	52·65
1883	432	22,634	535	32,557	.....	14,384	1,967	72,507	.....	73·00
1884	404	5,932	413	48,391	.....	12,173	2,819	70,132	.....	73·43
1885	519	6,484	22	45,264	.....	4,613	2,945	59,847	....	77·62
1886	737	9,579	154	42,261	.....	1,671	4,814	59,216	. . .	77·88
1887	790	675	2	44,580	.. ...	716	1,370	48,133	.....	82·02
1888	384	2,206	168	6,237	.....	.....	2,196	11,191	....	95·82
1889	473	8,002	8,950	40,096	16	1,405	1,003	59,945	. ....	77·61
1890	545	10,378	10,408	26,639	8	4,635	2,356	54,969	.....	79·47
1891	292	4,298	1,652	27,418	.....	2,130	3,620	39,410	....	85·28
1892	273	4,806	5,657	5,283	. . . .	199	2,340	18,558	....	93·07
1893	119	2,036	3,968	8,476	.....	237	2,784	17,620	...	93·43
1894	8	10,295	10,514	17,160	....	.....	2,609	40,584	.....	84·84
1895	66	3,073	7,352	1,900	1,816	.....	258	14,465	...	94·23
1896	.....	1,825	7,778	7,552	.....	.....	2,468	19,623	..	93·01
1897	.....	6,588	5,550	7,349	498	219	245	20,449	.....	92·37
1898	160	2,111	5,886	1,450	16	.....	784	10,407	....	96·12
1899	216	3,106	4,478	2,400	.....	.....	2,346	12,546	. ..	94·61
1900	214	485	1,404	2,400	... .	.. ....	403	4,906	... ..	98·54
1901	245	526	... . .	5,375	.....	.....	120	6,266	.....	97 67
1902	159	.....	.....	3.678	3	.....	632	4,472	.....	98·34
1903	.....	.....	.... . .	8,239	... ..	....	570	8,809	...	96 71

*Apples, meal, all kinds, potatoes.

F.—Table showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland Canal during a series of thirty-three years, ended December 31, 1903.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1873	30,660	345,720	180,042	643	1 188	3	3,557	563,813
1874	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877	13,588	248,894	169,185	10,216	2,810	2,405	1,833	448,931
1878	8,854	188,106	185,931	1,217	3,088	....	2,100	389,296
1879	10,588	271,545	114,276	803	1,196	.....	2,387	430,795
1880	12,467	240,601	162,891	... .	477	... .	1,418	417,853
1881	9,655	121,393	103,075	252	.. . .	6	1,371	235.752
1882	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883	13,256	146,741	182,143	975	731	518	10,971	355,335
1884	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886	19,418	146,151	218,897	.. ....	4,891	.....	14,581	403,928
1887	23,940	210,755	114,938	1,711	12,050	....	12,149	375,543
1888	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895	43,895	202,636	164,894	8,689	18,236	... .	46,435	484,785
1896	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
1899	11,625	197,732	204,004	2,424	23,541	923	18,440	458,689
1900	10,968	137,800	163,509	3,449	40,256	3,538	14,802	374,322
1901	18,937	151,325	67,756	7,119	28,281	2,961	14,021	290,400
1902	22,282	223,499	67,647	7,418	11,223	4,079	12,912	349,060
1903	25,997	257,370	210,758	14,656	7,911	4,904	13,982	535 578

*Fiscal. †Apples, meal, all kinds, pease, potatoes.

G.—Table showing the Tonnage of the undermentioned Articles passed through the Welland Canal in transit between Ports in the United States during a series of thirty-three years, ended December 31, 1903.

Years.	Vegetable Food.								Heavy Goods.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other Articles.	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	30,681	211,085	91,149	2,942	.....	667	1,006	337,530	68,064	14,334	89,086	28,566	35,912	235,962
1872	10,482	124,695	89,761	1,391	7,400	.....	608	234,337	24,040	13,239	49,843	95,741	59,401	242,264
1873	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176
1874	8,230	229,053	125,627	.....	5,948	.....	5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895
1875	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	11	4,123	12,931	192,767	34,616	244,451
1876	5,187	96,247	58,138	.....	1,905	525	403	162,405	.....	5,531	29,395	167,110	25,808	227,844
1877	3,342	107,396	65,260	1,603	2,314	258	413	180,586	8,976	8,688	8,336	172,868	41,107	239,975
1878	1,316	65,542	60,026	859	277	.....	341	128,361	.....	10,713	3,892	150,583	13,535	178,723
1879	159	53,791	33,401	.....	464	.....	11	87,826	2,405	3,648	6,318	118,573	17,797	148,741
1880	.....	30,611	16,122	1,551	296	.....	....	48,580	1,743	3,515	371	65,945	18,380	92,954
1881	.....	34,320	30,031	224	.....	.....	10	65,285	1,313	5,570	.....	83,858	6,464	97,205
1882	107	30,227	32,433	537	.....	684	14	64,002	.....	4,076	.....	158,552	14,533	177,161
1883	2,041	54,382	66,128	735	731	.....	8,579	132,496	1,209	6,901	8	196,462	24,891	229,471
1884	1,715	40,956	53,707	.....	9,874	.....	8,170	114,422	698	599	.....	210,790	15,100	227,187
1885	124	53,235	63,229	732	882	.....	1	118,203	.....	1,594	.....	198,416	15,029	215,039
1886	7,591	53,258	94,048	.....	4,790	.....	13,201	172,888	156	5,328	1	189,964	11,364	206,813
1887	11,780	37,678	83,431	1,732	12,050	.....	10,859	157,530	15	4,406	.....	82,780	627	87,828
1888	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	56	173,259	2,309	177,288
1889	5,017	39,229	147,045	.....	27,492	.....	17,225	236,208	.....	1,587	896	227,476	1,204	231,163
1890	9,204	31,527	180,842	6,519	27,030	.....	20,497	275,619	.....	504	208	162,231	1,620	164,563
1891	6,802	32,097	127,494	8,113	52,823	.....	26,115	253,444	.....	292	705	186,572	1,775	189,342
1892	11,018	26,950	131,222	6,433	36,935	....	31,992	244,550	.....	576	2	183,895	.....	184,473
1893	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389	.....	344	.....	206,827	.....	207,171
1894	17,795	53,846	105,329	28,095	27,621	.....	60,462	198,358	.....	297	.....	188,521	.....	188,818
1895	10,169	27,881	100,512	7,904	17,020	.....	46,316	209,802	181	246	.....	149,490	.....	149,917
1896	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407	.....	146	.....	207,348	.....	207,494
1897	7,237	28,919	169,057	14,173	14,969	.....	41,887	276,242	965	15	.....	165,143	.....	166,123
1898	4,212	11,268	150,667	6,909	12,732	1,197	22,671	209,656	770	339	4	156,814	.....	157,927
1899	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892	351	1,646	553	88,931	.....	91,181
1900	7,966	18,771	60,545	2,402	39,706	2,149	14,248	145,787	.....	953	.....	46,024	.....	46,977
1901	17,165	23,557	55,531	7,119	26,344	.....	14,016	143,732	83	80	105	46,702	.....	46,970
1902	13,785	32,639	66,111	7,418	10,006	.....	12,675	142,634	.....	214	.....	12,911	.....	13,125
1903	6,082	15,139	108,917	11,433	6,112	4,174	13,568	165,725	459	.....	.....	113,072	.....	113,535

* Apples, meal, all kinds, pease, potatoes.

H.—Table showing the Tonnage of Vegetable Food carried on each of the Lines of Canals and the two principal Railways, competing for the Carrying Trade between Lake Erie and Tidewater, for a series of thirty-three years, ended December 31, 1903.

Year.	Total on New York Canals.	Total on Welland Canal.	Total on New York Central and Erie Railways.	Quantity cleared at Buffalo and Tonawanda by Erie Canal.	Quantity cleared at Oswego by Canal.	Quantity cleared through the Welland Canal in transit between ports in the United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	1,302,613	503,860	1,087,809	786,436	267,815	337,530
1872	1,674,320	538,147	1,870,614	1,317,276	169,818	234,337
1873	1,745,171	579,880	2,036,992	1,432,174	131,765	243,366
1874	1,767,598	647,397	2,791,517	1,557,509	243,325	374,226
1875	1,305,550	417,936	2,343,241	1,017,559	126,763	177,968
1876	1,064,293	409,788	2,875,803	783,331	99,975	162,405
1877	1,498,984	464,181	2,493,683	1,223,100	126,899	180,586
1878	1,912,734	403,403	3,695,764	1,644,301	93,149	128,361
1879	1,833,399	438,564	4,353,617	1,565,543	127,168	87,826
1880	2,371,090	442,182	4,732,385	2,065,184	135,410	48,580
1881	1,116,561	269,395	4,983,722	878,842	115,638	65,285
1882	1,118,776	306,482	3,885,557	864,826	126,804	64,002
1883	1,379,000	372,236	4,422,461	1,191,974	72,507	132,496
1884	1,236,986	305,734	3,639,805	1,078,909	70,132	114,422
1885	1,063,310	273,905	4,105,594	918,352	59,847	118,203
1886	1,489,886	414,812	3,802,262	1,353,591	59,216	172,888
1887	1,552,764	394,971	3,847,766	1,449,984	48,133	157,530
1888	1,166,958	419,786	3,197,734	1,052,834	11,191	189,825
1889	1,296,896	542,043	3,654,984	1,155,175	59,945	236,208
1890	1,167,901	519,291	4,336,199	953,337	54,969	275,619
1891	1,092,355	367,177	3,565,381	1,000,171	39,410	253,444
1892	937,999	527,426	5,913,013	870,570	18,558	244,550
1893	1,452,563	805,253	5,107,426	1,395,391	17,620	311,389
1894	1,400,129	591,409	4,281,056	1,331,101	40,584	293,148
1895	602,505	486,421	3,798,574	508,596	14,465	209,802
1896	957,182	788,974	5,183,540	877,144	19,623	300,407
1897	744,575	816,914	5,673,638	688,635	20,449	276,242
1898	653,027	720,183	7,060,542	607,557	10,407	209,656
1899	577,486	459,688	6,211,827	527,868	12,546	141,892
1900	472,857	375,720	6,053,005	438,434	4,906	145,787
1901	557,099	290,909	6,334,001	473,729	6,266	143,732
1902	489,053	350,792	6,532,263	436,943	4,472	142,634
1903	512,601	537,252	5,548,603	445,518	8,809	165,725

* Fiscal.

SESSIONAL PAPER No. 20

I.—STATEMENT showing the Quantity of Through Freight passed DOWN the Welland Canal in Canadian and United States Vessels entering the Canal at Port Colborne, during the Season of Navigation in 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902 and 1903.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	239	100,324	186	73,140	245	248,837	134	52,087	804	474,388
1892.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		74,578		54,764		60,364		36,898		226,604
Corn		17,477		7,369		146,080		21,631		192,548
Barley						3,995		2,438		6,433
Oats						36,935				36,935
Pease		524								524
Rye		5,066				3,718		608		9,392
Coal		775		13,350				1,365		15,490
Miscellaneous merchandise		2,139		2,786		44,117				49,042
Shingles, woodenware, &c		1				45		9		55
Sawed lumber Ft. B.M.		6,278,253		7,504,256		10,494,692		26,832,564		51,109,765
Square timber Cub. ft.		754,213		1,421,260		2,601		1,310		2,179,384
Staves No.		46,800		32,838						79,638
Firewood Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage	No.	Tonnage.	No.	Tonnage.
	193	100,107	143	58,652	390	375,682	236	122,326	962	656,767
1893.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		83,447		31,185		72,671		68,628		255,931
Corn		23,817		12,946		313,246		91,083		441,092
Barley		1,527		183		16,189		562		18,461
Oats		223				27,903		3,038		31,164
Pease										
Rye						3,216		455		3,671
Coal		638		13,580				5,849		20,067
Miscellaneous merchandise		6,179		286		44,976		1,647		53,088
Shingles, woodenware, &c				15		22				37
Sawed lumber Ft. B.M.		13,750,267		2,748,941		17,359,573		41,863,852		75,722,633
Square timber Cub. ft.		836,048		1,437,893		5,133				2,279,074
Staves No.				18,484						18,484
Firewood Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	199	104,649	112	57,668	287	279,621	144	63,770	742	505,708
1894.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		98,586		54,444		79,715		37,095		268,840
Corn		10,368		5,614		122,211		31,040		169,233
Barley		258				28,095				28,353
Oats		175		107		27,621				27,903
Pease										
Rye										
Coal		1,483		1,892		61		11,109		14,545
Miscellaneous merchandise		16,949		664		83,198		1,977		102,788
Shingles, woodenware, &c		22								22
Sawed lumber Ft. B.M.		8,423,295		279,830		11,719,664		31,891,456		52,313,745
Square timber Cub. ft.		771,328		1,578,981						2,350,309
Staves No.										
Firewood Cords.										

I.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage
	209	108,776	151	73,895	205	223,743	101	41,327	666	447,741
1895.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	72,895		68,935		29,345		30,723		201,898	
Corn	16,854		3,724		126,943		17,369		164,890	
Barley	798		162		7,729		.....		8,689	
Oats	1,531		246		16,442		.....		18,219	
Pease	.....		.....		.....		.....		.....	
Rye	.....		.....		.....		.....		.....	
Coal	2		3,984		.....		4,426		8,412	
Miscellaneous merchandise	37,356		2,361		67,705		1,324		108,746	
Shingles, woodenware, &c	20		.....		863		1,079		1,962	
Sawed lumber Ft. B.M.	1,057,146		248,071		9,385,890		14,929,734		25,620,841	
Square timber Cub. ft.	1,027,913		2,049,368		.....		35,000		3,112,281	
Staves No.	.....		.....		.....		.....		.....	
Firewood Cords.	.....		.....		.....		.....		.....	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	224	122,521	181	82,543	343	337,983	163	96,506	911	639,553
1896.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	113,331		90,979		78,741		34,476		317,527	
Corn	9,360		3,855		218,315		88,914		320,440	
Barley	240		.....		11,128		.....		11,368	
Oats	441		1,270		24,847		1,620		28,178	
Pease	1,403		1,354		.....		273		3,030	
Rye	5,035		644		2,837		454		8,970	
Coal	7		11,106		1,255		629		11,997	
Miscellaneous merchandise	29,820		1,452		82,319		4,374		117,965	
Shingles, woodenware, &c	134		.....		22		.....		156	
Sawed lumber Ft. B.M.	2,123,213		.....		18,259,810		27,796,146		48,179,169	
Square timber Cub. ft.	942,923		1,649,145		.....		246,024		2,838,092	
Staves No.	.....		.....		.....		.....		.....	
Firewood Cords.	.....		.....		.....		55		55	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	225	131,907	163	76,760	388	382,231	144	86,675	920	677,573
1897.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	121,762		55,724		106,064		37,891		321,441	
Corn	33,694		15,244		274,855		66,822		390,615	
Barley	.....		.....		14,173		.....		14,173	
Oats	223		.....		23,515		1,168		24,906	
Pease	1,851		.....		.....		.....		1,851	
Rye	2,047		919		5,517		.....		8,483	
Coal	3,873		3,947		368		1,615		9,803	
Miscellaneous merchandise	15,739		3,290		70,968		4,174		94,071	
Shingles, woodenware, &c	1,268		5		404		.....		1,677	
Sawed lumber Ft. B.M.	1,573,447		.....		20,284,446		20,673,202		42,531,095	
Square timber Cub. ft.	1,327,823		2,217,629		.....		616,093		4,161,545	
Staves No.	2,577,160		.....		.....		.....		2,577,160	
Firewood Cords.	4		.....		.....		.....		4	

SESSIONAL PAPER No. 20

I.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	126,398	104	59,532	354	355,702	195	108,720	869	650,352
1898.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	95,567		36,157		54,934		18,355		205,013	
Corn	56,538		30,455		284,059		66,761		437,813	
Barley	.....		.....		9,465		2,821		12,286	
Oats	.....		.....		17,329		.....		17,329	
Pease	260		.....		45		.....		305	
Rye	3,564		1,480		9,135		1,948		16,127	
Coal	575		1,916		759		2,620		5,870	
Miscellaneous merchandise	19,385		4,104		47,271		8,758		79,518	
Shingles, woodenware, &c	2		9		.....		.....		11	
Sawed lumber.....Ft. B.M.	4,910,669		1,641,783		16,220,972		24,484,283		47,257,707	
Square timber.....Cub. ft.	825,545		1,183,821		.....		388,410		2,397,776	
Firewood.....Cords.	249		.....		.....		.....		249	
Staves.....No.	.....		.....		.....		.....		.....	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	191	100,242	129	75,777	201	212,027	78	36,962	599	425,008
1899.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	91,901		80,928		16,250		7,244		196,323	
Corn	28,015		18,905		138,834		18,250		204,004	
Barley	.....		.....		2,424		.....		2,424	
Oats	1,557		.....		21,646		.....		23,203	
Pease	.....		.....		.....		.....		.....	
Rye	.....		.....		923		.....		923	
Coal	435		6,736		.....		3,398		10,569	
Miscellaneous merchandise	25,203		18,651		49,522		1,567		94,943	
Shingles, woodenware, &c	485		916		.....		100		1,501	
Sawed lumber.....Ft. B.M.	2,077,748		772,739		14,855,338		19,949,079		37,654,904	
Square timber.....Cub. ft.	322,138		585,780		20,802		328,806		1,257,526	
Firewood.....Cords	.....		9		.....		.....		9	
Staves.....No.	.....		.....		.....		.....		.....	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	114,885	109	67,475	168	182,444	71	30,309	564	395,113
1900.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	67,694		43,157		23,066		2,130		136,047	
Corn	39,597		31,248		78,701		13,963		163,509	
Barley	.....		.....		2,402		1,047		3,449	
Oats	.....		.....		39,706		407		40,113	
Pease	115		.....		4		.....		119	
Rye	1,389		.....		2,149		.....		3,538	
Coal	723		637		433		559		2,352	
Miscellaneous merchandise	53,649		31,536		43,344		3,564		132,093	
Shingles, woodenware, &c	1,078		.....		.....		.....		1,078	
Sawed lumber .... Ft. B.M.	6,847,279		5,344,258		14,984,483		18,770,405		45,946,425	
Square timber.... Cub. ft.	439,827		355,951		11,583		198,420		1,005,781	
Firewood.....Cords.	126		255		.....		.....		381	
Staves..... No.	1,000		.....		.....		.....		1,000	

I.—Statement showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—*Concluded.*

Articles.	Canadian Vessels.				United States Vessels.				Total.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	197	103,802	114	59,022	163	182,497	48	22,319	522	367,640
1901.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		57,641		58,973		31,955		1,241		149,810
Corn		7,350		4,689		55,717				67,756
Barley						7,119				7,119
Oats		944				27,197				28,141
Pease										
Rye		2,961								2,961
Coal		1,960		362		357				2,679
Miscellaneous merchandise		71,300		32,312		12,874		7,469		123,955
Shingles, woodenware, &c		18								18
Sawed lumber Ft. B.M.		6,533,423		4,060,251		11,089,806		13,092,940		34,776,420
Square timber Cub. ft.		362,441		204,682		9,384		149,531		726,038
Firewood Cords.		165		264						429
Staves No.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	196	90,791	122	73,958	191	201,339	52	22,097	561	388,185
1902.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		82,954		85,973		52,889				221,816
Corn		148		1,388		66,111				67,647
Barley						7,418				7,418
Oats		1,200		43		9,963				11,206
Pease										
Rye		3,808				271				4,079
Coal		3,977		25,732		13,497		8,332		51,538
Merchandise		33,111		8,723		38,351		1,594		81,779
Shingles, woodenware, &c		47		28		4				79
Sawed lumber Ft. B.M.		13,218,960		3,256,187		25,437,287		19,540,426		61,452,860
Square timber Cub ft.		370,718		557,689				115,000		1,043,407
Firewood Cords		56		40						96
Staves No.				14,000						14,000
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	239	151,850	76	45,918	243	252,094	69	27,854	627	477,716
1903.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		149,378		38,473		60,514		6,305		254,670
Corn		21,356		4,682		174,588		10,132		210,758
Barley		2,580		667		11,409				14,656
Oats		306		1,335		6,112				7,753
Pease		63				22				85
Rye						4,904				4,904
Coal		389		12,991		8,133		8,496		30,009
Merchandise		39,563		3,367		41,584		2,000		86,514
Shingles, woodenware, &c				54						54
Sawed lumber Ft. B.M.		12,841,552		1,625,855		17,871,652		14,733,677		47,072,736
Square timber Cub. ft.		572,000		660,000				84,200		1,316,200
Firewood Cords.				210		9				219
Staves No.				641,000						641,000

WELLAND CANAL THROUGH FREIGHT—RECAPITULATION.

Welland Canal—West-bound Freight.

The total quantity of Through Freight passed Up the Welland Canal in Canadian and United States Vessels, during the season of navigation in 1903, is as follows:

Summary.	Tons.	Tons.
In Canadian steam vessels	60,642	
" sail "	14,663	
Total quantity in Canadian vessels		75,305
In United States steam vessels	164,564	
" sail "	23,343	
Total in United States vessels		187,907
Grand total freight passed up the Welland Canal in Canadian and United States vessels		263,212

STATEMENT of the Quantity of Through Freight passed Up and Down, on the Welland Canal during the season of navigation in 1903.

Summary.	Tons.	Tons.
In Canadian steam vessels up	60,642	
" " down	246,485	
Total in Canadian steam vessels		307,127
In Canadian sail vessels up	14,663	
" " down	77,691	
Total, in Canadian sail vessels		92,354
Total, quantity in Canadian vessels		399,481
In United States steam vessels up	164,564	
" " down	337,071	
Total in United States steam vessels		501,635
In United States sail vessels up	23,343	
" " down	54,348	
Total in United States sail vessels		77,691
Total quantity in United States vessels		579,326
Total in Canadian and United States vessels		978,807
	Down or East bound.	Up or West bound
In Canadian vessels	324,176	75,305
In United States vessels	391,419	187,907
Total	715,595	263,212

1—8 Statement of Large Class of Vessels (Upbound and Downbound) at the Welland Railway Elevator at Port Colborne, showing the Tonnage, Draught of Water, Number of Cargoes passed through the enlarged Welland Canal during the Season of Navigation 1907.

CANAL STATISTICS.

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K.—Statement showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, during the Seasons of Navigation in 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902 and 1903.

Articles.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Cement and water lime						12							
Clay, lime and sand							38	52	15	15			
Iron railway												50	
" pig	371			195	79	5				508			
" all other				1	1,766	2,020	7,564	6,217	5,063	4,292	1,178	5,785	2,542
Steel					394	542	375	1,351	3,000	5,420			
Stone, for cutting						200							
Apples		54		50	28	1,263							
Barley			600	258	959	240		3,960	596	1,288			2,206
Corn	52,539	53,689	278,564	60,661	70,235	182,330	267,583	310,498	150,999	109,359	14,319	1,719	123,864
Flaxseed							3,293	5,687			4,965		3,643
Flour	3,324	2,874	5,514	16,503	30,916	11,964	1,029	653	4,229	1,595	1,400	6,755	16,151
Meal, all kinds	67	16		4	65						35		348
Oats			9,761	175	1,654	12,373	6,847	3,975	10,250	8,925	1,584	1,442	2,438
Oil cake											1,083		462
Pease	390	524				3,020	2,078	260		115			63
Rye	64,978	9,119	3,669			8,323	8,435	15,488	923	3,078	2,961	4,079	4,260
Salt							216	144	183		50		132
Seeds, all kinds	2	75				20			200				
Hay, pressed									96		246		
Tobacco, raw	1						51				23		
Wheat	159,785	194,281	209,212	212,557	158,643	255,198	278,498	184,154	169,978	121,896	132,702	200,975	226,746
All other agricultural products, vegetable	2			29		29		56	32				
Hides, skins, horns and hoofs		20											
Horses	2	2	1	1	1	1	1	4	1				
Lard and lard oil	100										1,155		
Meats, all kinds											114		
Pork	201			717		1					34		
Tallow													3
All other agricultural products, animal		103											
Total, Class 3	281,762	260,757	507,321	201,151	264,740	477,541	576,008	532,499	345,565	256,491	161,849	220,805	382,858
Class 4.													
Agricultural implements									3		1,785	13	58
Ashes	40	17	23	19	34	94	133	73	55	25	3		2

K.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, &c.—*Concluded.*

Articles.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.													
Crockery						5							
Furniture	2	1		2			1			1	5		3
Glass, all kinds	1					9	53	75	16	6	1		15
Molasses					100	167	9	56	159			54	240
Nails									1				19
Oil					6	23	112	1,141	7,143	15,647	14,987	12,091	14,619
Paint					2						17		5
Pitch and tar													
Rags						4							4
Rosin													20
Soda ash											4		
Sugar						1					112		
Stone, wrought													
Tobacco									96				
White lead										16			
Whisky, beer and other spirits	105	6	1		101		46	4	74	11	32		2
Merchandise, not enumerated	278	36	4	330	558	376	1,226	866	518	92	2,420	419	582
Total, Class 4	426	60	28	351	801	679	1,580	2,215	7,969	15,798	19,366	12,577	15,569
Class 5.													
Barrels, empty		1			1				1	182	66	15	
Hoops							257						
Sawed lumber	3,908	1,678	667	683	1,117	657	478	3,065	924	15,760	2,635	1,085	
Staves, pipe and barrel		8					4,716						
" West India and pipe		200											
Timber, square, in vessels													
" in rafts	5,680	400				1,200	1,207	329	26				
Woodenware				6								17	
Total, Class 5	9,588	2,327	667	689	1,118	1,857	6,658	3,394	951	15,942	3,205	1,117	
Special Class.													
Coal												15,976	
Grand total	291,776	263,144	508,016	292,191	266,659	480,077	584,246	538,108	354,485	28,231	184,420	250,475	398,427

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canal to Lake Erie, during the Seasons of Navigation in 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902 and 1903.

Articles.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Bricks	469			1	24	15	70	70	24	49	196	22	80
Brimstone											5	20	23
Cement and water lime	2,380	1,570	3,169	2,281	1,859	1,686	837	996	997	1,931	2,916	178	3,924
Clay, lime and sand	206	240		253			4	144	8	4	2	1	181
Cotton, raw													23
Fish	7	426	465	512		11	10	9	10	8	8		8
Gypsum									4				
Iron, railway	2,855	1,171	6,576	20		1,687				74	748	11,735	39,611
" pig	112	74	25		56	28	6			3		558	273
" all other	595	387	543	114	1,831	727	559	699	1,318	1,428	4,950	2,904	5,845
Salt	4,391	2,034	995	843	932	822	25	35		48	75	4	87
Steel		269	426	248	528			19	18		3	11	332
Stone for cutting		145				4	62						
Flour			3								16		
Hay					121								
Meals				15									17
Oats													
Potatoes													
Seeds, all kinds				33	25	99	121	56	121	218	302	58	325
Tobacco, raw												1	2
Agricultural products not enumerated, vegetables	52			5	26		4				1	1	
Hides and skins					26							16	6
Horses						1		1					
Lard and lard oil		16			1			2				11	
Meats other than pork													1
Pork										1			
Wool	2	13											
All other articles not enumerated	2			10									
Total, class 3	11,071	6,345	12,202	4,335	5,432	5,080	1,698	2,031	2,500	3,764	9,222	15,520	50,768
Class 4.													
Ashes, pot and pearl	31	88					1						2
Crockery and earthenware	251	8	98	107	12	83	4	33	3	5			32
Dye woods, &c													
Furniture	1	3					2			1			1

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canal to Lake Erie, &c.—*Concluded.*

Articles.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.													
Glass, all kinds	30	152	365	175	394	612	799	150	299	456	612	1,384	1,207
Manilla				11									
Molasses		32	43	42	20	1					1		6
Nails	560	276	472	500	1,149	409	129	229	518	180	675	1,292	2,878
Oil, in barrels	64	2	44	8	31	33	12	15	21	74	83	14	16
Paint	61	15	70	8	75	49	20	35	2	12	69	97	158
Pitch and tar	22	15	26	152	67	60	20	37	6	21	27	27	58
Rags									14			1	29
Resin									15				1
Soda, ash	377	352	68	94	84	74	249	88	108	69	169	201	264
Stone, wrought			14			17	25	31					
Sugar	412	1,320	2,218	2,724	1,430	1,873	311	566	1,596	430	810	1,314	204
Tin	23	27	34	327	396	395	359	237	159	117	338	506	209
Turpentine											1	2	1
White lead	3	6	35	2	7	10	5		1	4	11	37	80
Whiting	50	71	31	1	113	56	104	93	89	39	49	61	22
Whisky, beer, &c.	294	220	26	53	77	51	93	98	178	295	131	182	452
Merchandise not enumerated	810	538	799	900	1,268	1,247	711	793	482	744	1,516	1,049	3,674
Total, class 4	2,989	3,125	4,343	5,104	5,123	4,970	2,844	2,405	3,491	2,447	4,492	6,169	9,294
Class 5.													
Barrels, empty													
Firewood in vessels												3,600	40,026
Lumber, sawn, in vessels													
Railway ties in vessels													611
Woodenware													
Total, class 5												3,600	40,637
Special Class.													
Coal													
Grand total	14,060	9,470	16,545	9,439	10,555	10,050	4,542	4,436	5,991	6,211	13,714	25,289	100,699

M.—Statement showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1891 to 1903, inclusive.

Articles.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Bricks							845						
Cement and water lime								300		18			
Fish	1		5	5									
Iron, railway					181		965	770					
" all other	10	1	102		214			324	1,008	714		30	
Salt	494								549		105		
Steel		1				498		2,951	13,522	3,110			
Stone for cutting													
Apples													
Barley	8,113	6,433	16,751	28,095	7,904	11,128	14,173	6,909	2,424	2,462	7,119	7,418	11,433
Corn	127,494	131,222	198,777	105,329	100,512	175,094	169,057	150,667	81,777	60,545	55,531	66,111	108,917
Flour	6,802	11,018	6,588	17,795	10,169	16,224	7,237	4,212	6,118	7,966	17,168	13,785	6,082
Hay, pressed							301						
Meal, all kinds	26,096	31,724	36,352	60,390	46,316	46,456	41,644	22,626	18,198	14,244	14,016	12,675	13,546
Oil cake				29						2,705	1,302	110	740
Oats	52,823	36,935	23,870	27,621	16,442	16,137	14,969	12,729	19,526	39,706	26,344	10,006	6,112
Pease								45		4			22
Potatoes													
Rye			864			490		1,197	923	2,119			4,174
Flaxseed									200				1,594
Seeds, all kinds	256	50	16		14	78	299	44	11			10	27
Tobacco											23		
Wheat	32,097	26,950	28,187	53,846	27,881	34,878	28,919	11,268	12,926	18,771	23,557	32,639	15,436
Agricultural products, vegetables										6	10		1
Hides and skins, &c	42				8	41	23						
Horses	3		2	4		3	3	2		4			2
Lard and lard oil, &c	10		1		6	1,348	1,444	3,671	864	1,588	1,680	2,413	
Meats, other than pork	2	29			30								
Pork	73	1	52	56	87	390	243	1,271	343	117	970	632	152
Sheep													
Tallow								359	201	631	119		
Wool	1,237	70	80	1,484	1,536	900	197	89	130		3	752	482
Total, class 3	255,553	244,434	311,647	294,654	211,300	303,665	280,319	219,434	158,720	154,680	147,947	146,581	168,720
Class 4.													
Agricultural implements												399	
Crockery and earthenware													
Furniture	7				2			2	7		3	17	

M.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1891 to 1903, inclusive—*Concluded.*

Articles.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.													
Glass, all kinds	1												
Marble											4		
Molasses									8	57			
Nails				57					11				
Oil, in barrels	1				30	1,005	198	119	367	17	22	1,594	2,000
Paint		44						3	2	36			
Rags									1				4
Soda ash													
Stone, wrought													
Sugar					59	165	31			154	448	280	
White lead													
Whisky, beer and all other spirits	167	46	83		15			34	168	1	1		3
Merchandise	1,865	1,331	1,693	2,976	7,656	3,990	3,591	3,828	6,219	7,889	3,327	1,928	2,010
Total, Class 4	2,041	1,421	1,782	3,033	7,762	5,160	3,820	3,986	6,783	8,164	3,805	4,218	4,017
Class 5.													
Empty barrels			9			10				5	282		
Firewood, in vessels						165						4	
Lumber, sawn, in vessels	45,504	54,173	68,985	62,905	41,974	75,515	68,280	52,844	57,695	55,128	38,685	72,806	48,337
Masts and spars, in vessels							403						
Hoops													
Railway ties, in vessels					446								
Shingles			13										
Staves, barrel													
Timber, square, in vessels					500		1,040						
Woodenware, &c	4	54				12	1						
Total, Class 5	45,508	54,227	69,007	62,905	42,920	75,702	69,724	52,844	57,695	55,133	38,367	72,810	48,337
Special Class													
Coal	1,382	651	2,123	727	603	1,255		759	2,293	992	357	501	
Stone, not suitable for cutting													
Kryolite	1,773												
Total, Special Class	3,155	651	2,123	727	603	1,255		759	2,293	992	357	501	
Grand total	306,257	300,733	384,559	361,319	262,585	385,782	353,863	277,023	225,491	218,969	190,476	224,110	221,074

N.—STATEMENT showing the Number of Vessels which took their Cargoes of WHEAT through the Welland Canal from Ports west of Port Colborne; the quantity transhipped at Kingston, and the quantity of each Cargo through the St. Lawrence Canals to Montreal during the Season of Navigation in 1903.

Names of Vessels.	Original quantity through the Welland Canal.	Quantity transhipped at Kingston.	Cargo through the St. Lawrence Canals to Montreal
Canadian Steamer Advance	1,224	155	1,069
" " "	1,041		1,041
" " "	1,050		1,050
" " "	1,080		1,080
" " A. E. Ames	1,633		1,633
" " "	1,620		1,620
" " "	1,590		1,590
" " "	1,500		1,500
" " Arabian	1,200		1,200
" " "	1,206		1,206
" " "	1,200		1,200
" " "	1,200		1,200
" " "	1,200		1,200
" " Myles	1,081	601	480
" " Neepawah	1,829		1,829
" " H. M. Pellatt	1,500		1,500
" " "	1,560		1,560
" " "	1,260		1,260
" " "	510		510
" " H. M. Penall	1,560		1,560
" " "	1,290		1,290
" " J. H. Plummer	1,320		1,320
" " "	1,620		1,620
" " "	1,650		1,650
" " "	1,590		1,590
" " "	1,620		1,620
" " Turret Chief	1,897		1,897
" " "	1,050		1,050
" " Wahcondah	1,620		1,620
" " "	1,632		1,632
" " "	1,629		1,629
" " "	1,620		1,620
" " "	1,590		1,590
" " "	1,590		1,590
" Barge F. L. Danforth	1,350	629	721
" " Melrose	1,500	240	1,260
" " Minnedosa	480		480
" " "	1,800	210	1,590
" " Selkirk	1,440	90	1,350
United States Steamer H. G. Dalton	2,055		2,055
" " A. D. Davidson	1,515		1,515
" " "	2,130		2,130
" " G. E. Howe	701		701
" " J. S. Keefe	2,175		2,175
" " A. Marshall	2,100		2,100
" " S. N. Parent	2,100		2,100
" " R. Wallace	2,160		2,160
Total	69,268	1,925	67,343

Number of cargoes of wheat	47
Quantity through Welland to Kingston	69,268 tons.
" transhipped at Kingston	1,925 "
" taken to Montreal in vessels in which it arrived Kingston	67,343 "

N.—STATEMENT showing the Number of Vessels which took their Cargoes of Corn through the Welland Canal from Ports west of Port Colborne; the quantity transhipped at Kingston, and the quantity of each Cargo through the St. Lawrence Canals to Montreal, during the Season of Navigation in 1903.

Name of Vessel.	Original Quantity through the Welland Canal.	Quantity transhipped at Kingston.	Cargo through the St. Lawrence Canals to Montreal
	Tons.	Tons.	Tons.
Canadian Steamer A. E. Ames	1,652		1,652
" " Advance	1,064		1,064
" " Cuba	560		560
" " "	480		480
" " "	504		504
" " "	336		336
" " "	448		448
" " "	336		336
" " "	280		280
" " "	504		504
" " "	504		504
" " "	504		504
" " Lake Michigan	454		454
" " Melbourne	280		280
" "	420		420
" "	448		448
" "	504		504
" "	280		280
" "	280		280
" "	504		504
" "	504		504
" "	504		504
" "	448		448
" Barge Winnipeg	1,400	84	1,316
United States Steamer J. Crerar	2,186		2,186
" " A. D. Davidson	756		756
" " G. C. Howe	1,477		1,477
" " J. Lambert	2,198		2,198
" " "	2,155		2,155
" " A. M. Marshall	2,184		2,184
" " W. P. Palmer	1,924		1,924
" " S. N. Parent	2,168		2,168
" " R. Wallace	2,168		2,168
" " A. B. Wolvin	1,941		1,941
Total	32,323	84	32,239

Number of cargoes of corn	34	
Quantity through Welland to Kingston	32,323	tons.
" transhipped at Kingston	84	"
" taken to Montreal in vessels in which it arrived at Kingston	32,239	"

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RECAPITULATION of the Number of Vessels passed DOWN the Welland Canal with Cargoes of Grain for Montreal; the quantity transhipped at Kingston, and the quantity taken to Montreal, for the Season of Navigation in 1903.

	Number of Cargoes.	Total Number.
Wheat	47	
Corn	34	
Total		81
	Tons.	Tons.
Quantity of wheat through the Welland Canal, bound for Montreal	69,268	
" corn " " "	32,323	
Total through the Welland Canal		101,591
Quantity of the above transhipped at Kingston—		
Wheat	1,925	
Corn	84	
Total transhipped		2,009
Quantity of the above cargoes taken to Montreal in vessels in which it arrived at Kingston—		
Wheat	67,343	
Corn	32,239	
Total quantity to Montreal		99,582
Grand total		101,591

O.—STATEMENT showing the Quantity of Grain passed Down the Welland Canal to Kingston, Ogdensburg and other Ports, in Canadian and United States Vessels entering the Canal at Port Colborne, during the Season of Navigation in 1903.

	Canadian Vessels.				United States Vessels.				Total.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage of Vessels.	No.	Tonnage of Vessels.	No.	Tonnage of Vessels.	No.	Tonnage of Vessels.	No.	Total Tonnage of Vessels.
	121	107,074	28	22,869	171	217,006	14	8,611	334	355,560
	Tons.		Tons.		Tons.		Tons.		Tons.	
Barley		2,580		667		11,409				14,656
Corn		21,356		4,682		174,588		10,132		210,758
Oats		306		1,335		6,112				7,753
Pease		63				22				85
Rye						4,904				4,904
Wheat		149,378		38,473		60,514		6,305		254,670
Total		173,683		45,157		257,549		16,437		492,826

			Tons.
133	cargoes in	Canadian Vessels, steam, total quantity	173,683
37	"	" sail "	45,157
205	"	United States vessels, steam "	257,549
14	"	" sail "	16,437

P.—Statement of the Quantity of Grain arrived at Kingston and Ogdensburg in Vessels which passed Down the Welland Canal, during the Season of Navigation in 1903.

Summary.	Tons.	Tons.
Canadian steam—133 cargoes of grain	173,683	
" sail 37 "	45,157	
Total in Canadian vessels		218,840
United States steam—205 cargoes of grain	257,549	
" sail 14 "	16,437	
Total in United States vessels		273,986
Total in Canadian and United States vessels		492,826
Distributed as follows :—		
63 Canadian and 18 United States vessels arrived at Kingston and discharged part of their cargoes, taking the balance to Montreal		99,582
308 vessels arrived at Kingston, Ogdensburg and other ports and discharged all their cargoes as follows :—		
81 cargoes in Canadian vessels 130,538		
227 " United States vessels 260,697		
Quantity discharged by 7 Canadian vessels which took the balance to Montreal 2,009		
Total quantity discharged	393,244	
Total quantity of above transhipped from Kingston and Ogdensburg to Montreal		*252,354
Quantity transhipped from Kingston and Ogdensburg to Cardinal		6,957
" remaining at Kingston, Ogdensburg and other American ports		133,933
Total		492,826

* Of this quantity 2,890 tons were transhipped from Kingston, being grain of 1902.

Q.—Comparative Statement of the Quantity of Grain passed Down the Welland Canal to Kingston and Ogdensburg, during the Seasons of Navigation in 1902 and 1903.

	1902.		1903.	
	No. of Cargoes.	Tons.	No. of Cargoes.	Tons.
Quantity arrived at Kingston in Canadian vessels	131	175,514	170	218,840
Quantity arrived at Kingston and Ogdensburg in United States vessels	135	136,652	219	273,986
Total	266	312,166	389	492,826
Quantity transhipped at Kingston and Ogdensburg in Canadian vessels for Montreal		* 166,866		252,354
Quantity taken to Montreal in vessels in which it arrived at Kingston		35,253		99,582
Quantity remaining at Kingston, Ogdensburg and Cardinal		110,047		140,890
Total		312,166		492,826

* Of this quantity 2,890 tons were transhipped to Montreal in 1903.
74 vessels took their cargoes through in 1903, against 36 in 1902.
7 " discharged part of their cargo in 1903, against 3 in 1902.
308 " " all their cargo in 1903, against 227 in 1902.

R.—Statement showing the Number of Vessels, their Tonnage, Number of Passengers and Tons of Freight passed down the Rapids of the St. Lawrence Canals during the Season of Navigation in 1903.

Destination.	No. of Sections.	No. of Vessels.	Tonnage of Vessels.	Number of passengers	Class Three.	Class Four.	Class Five.	Special Class.	Tolls.
			Tons.		Tons.	Tons.	Tons.	Tons.	$ cts.
Prescott to Montreal	4	115	58,411	15,306	284	942			2,200 01
" Lachine	3	30	16,131	2,534	975	937			531 42
Valleyfield to Lachine	1	171	37,866	4,025	1,798	709	36		278 29
Lachine to Montreal	1	300	55,166	20,649	1,253	1,213	17		731 18
Total		616	167,574	42,514	4,310	3,801	53		3,740 90

S.—The quantity of Coal passed through the Welland Canal during a series of years from 1885 to 1903, inclusive, and the amount of Tolls collected thereon, is as follows :—

Years.	From Canadian Ports to Canadian Ports.		From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total, Tons.	Amount of Tolls paid. Rate 20 cents a ton.
	Up.	Down.	Up.	Down.	Up.	Down.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		$ cts.
1885			193,442	4,974	10,321	31,350	240,087	48,017 40
1886			184,564	5,400	22,187	49,724	261,875	52,375 00
1887			81,617	1,163	26,775	25,968	135,523	27,104 60
1888			172,381	878	17,365	27,183	217,807	43,561 40
1889			226,352	1,124	12,036	25,931	265,443	53,188 60
1890	80		116,616	615	17,280	22,781	202,372	38,222 30
1891			185,190	1,382	17,374	20,698	224,644	44,928 20
1892			183,244	651	12,391	15,330	211,616	42,284 13
1893			204,704	2,123	8,325	17,944	233,096	46,619 20
1894			187,794	727	1,269	13,947	203,737	40,789 93
1895	4		148,887	603	1,565	7,807	158,866	31,773 05
1896	20	210	206,093	1,255	4,127	11,740	223,445	44,668 20
1897		4	165,143		1,277	9,799	176,223	35,244 60
1898			156,055	759	986	4,536	162,336	32,467 20
1899			86,638	2,293	525	8,276	97,732	19,546 40
1900	8		45,032	992		1,360	47,392	9,478 40
1901			46,345	357	456	2,322	49,480	9,896 00
1902			12,410	501	65	51,037	64,013	12,845 60
1903	3		113,076		4,796	30,009	147,884	29,576 80

NOTE.—Tolls on soft coal passed down the Welland Canal, during the season of 1890, were reduced from 20 to 10 cents a ton, per O. C. 11th May, 1890, for the season of 1890 only ; the rate for 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901 and 1902, being 20 cents a ton for passage either eastward or westward. During 1903 all tolls were free. O. C. Apr. 27, 1903.

T.—Statement showing the quantity of Coal passed through the whole length of the St. Lawrence Canal during the seasons of 1885 to 1903 inclusive.

Years.	Quantity passed up free of Tolls.	Quantity passed down to Montreal.	Total Quantity passed up and down.	Amount of Tolls on Quantity passed down to Montreal.
	Tons.	Tons.	Tons.	$ cts.
1885	5,035	122,829	127,864	18,424 35
1886	3,301	118,802	122,103	17,820 70
1887	7,579	121,618	129,197	18,242 70
1888	8,341	123,050	131,391	18,423 90
1889	5,360	124,290	129,650	18,604 90
1890	6,538	135,168	141,706	20,275 20
1891	7,951	141,701	149,652	21,255 15
1892	7,543	157,134	164,677	23,570 10
1893	2,285	147,139	149,424	22,070 85
1894	16,213	169,552	185,765	25,432 80
1895	.....	165,151	165,151	24,772 65
1896	689	161,551	162,240	24,232 65
1897	40	164,963	165,003	24,722 37
1898	400	175,609	176,009	26,341 05
1899	448	201,546	201,994	30,231 80
1900	10	280,169	280,179	42,025 35
1901	2,765	298,245	301,010	44,732 55
1902	9,231	95,702	104,933	11,958 90
1903	30	290,548	290,578	*43,555 73

Note.—Coal is allowed to pass free up the St. Lawrence Canals. Con. O. C. Oct. 26, 1889.

* These tolls were 'free' by O. C. April 27, 1903.

U.—Comparative Statement of the Quantity of Freight passed down the Welland Canal, showing the Quantity to Montreal, the Quantity to Canadian Ports between Port Dalhousie and Cornwall, and the Quantity to United States Ports, Oswego, Ogdensburg, &c., on the south side of Lake Ontario, for the years 1892 to 1903, inclusive.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1892.	Tons.	Tons.	Tons.
Ashes, pot and pearl	17	2	
Apples	54		
Barley			6,433
Corn	53,689	7,637	131,222
Coal		14,839	651
Flour	2,874		11,018
Fish	9		
Furniture	1		7
Hides	20		
Horses	2		
Iron, railway		100	
" all other		765	1
Meal, all kinds	16		31,724
Meats, other than pork	94		29
Oats			36,935
Oil		7	
Pease	524		
Potatoes			1
Pork			44
Rye	9,119	273	
Salt		865	
Seeds, all kinds	75		50
Steel			1
Stone for cutting		1,264	
Sugar			20
Wheat	194,281	5,373	26,950
Whisky, beer, spirits, &c	6	15	46
Wool			70
Merchandise not enumerated	36	13	1,304
Barrels, empty	1		29
Lumber, sawn, in vessels	1,678	150	83,403
Square timber	440	42,768	440
Staves and headings, pipe	8	80	
" " West India	200	76	
Shingles			25
Total	263,144	74,227	330,403
*Wheat	+4,341	—4,341	
Total	267,485	69,886	330,403

*This quantity of wheat was taken from Kingston to Ogdensburg and stored in elevators, and subsequently transhipped to Montreal.

A refund of 18 cents a ton, Welland Canal tolls, was allowed on wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat which passed down the whole length of the Welland and St. Lawrence Canals, to Montreal, or any port east of Montreal, and such products exported out of the country, and in such cases only.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1893.	Tons.	Tons.	Tons.
Ashes, pot and pearl	23		
Barley	600	1,110	16,751
Bricks		1,251	
Corn	278,564	5,752	156,776
Coal		17,944	2,123
Flour	5,514		6,588
Fish			5
Furniture			6
Horses	1	1	2
Iron, pig			100
" all other			2
Meal, all kinds		1,025	36,352
Meats, other than pork			1
Oats	9,761	1,090	20,313
Pork			52
Rye	3,669	1	1
Salt		286	
Seeds, all kinds			16
Wheat	209,212	17,602	29,117
Whisky, beer, &c	1		83
Wool			80
Merchandise not enumerated	4	2	1,693
Barrels, empty			9
Firewood (in rafts)		15	
Lumber, sawn, in vessels	667	1,981	123,665
Shingles			13
Square timber		45,605	
Staves and headings, barrel		12	
" pipe		7	
" West India		53	
Total	508,016	93,737	393,748

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1893.

The tolls were, however, reduced by Order in Council of 13th February, 1893, as follows:—"For the season of 1893, the canal toll for the passage of the following food products: wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton; and for passage eastward through the St. Lawrence Canals only, ten cents per ton, payment of the said toll of ten cents a ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canal."

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1894.	Tons.	Tons.	Tons.
Apples	50		
Ashes	19		
Barley	258		28,095
Bricks		552	
Coal		13,818	727
Corn	60,661	3,243	105,329
Dye woods and dye stuffs		4	2
Fish			5
Flour	16,503	41	16,880
Furniture	2	3	
Horses	1	2	4
Iron, pig	195	2,170	
" all other	1	183	
Meals	4		60,390
Nails			57
Oats	175	107	27,621
Oil cake	29		
" in barrels		27	
Pork	717		56
Salt		133	
Spirits, beer, &c		3	
Sugar			52
Wheat	212,557	13,349	42,934
White lead	16		
Wool			1,484
Merchandise not enumerated	314		2,889
Barrels, empty		16	
Sawn lumber, in vessels	683		86,545
Square timber "		47,030	
Woodenware	6		
Total	292,191	80,681	373,079

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1894.

The tolls were, however, reduced by Order in Council of 16th April, 1894, as follows :—For the season of 1894, the canal tolls for the passage of the following food products : wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton ; and for passage eastward through the St. Lawrence Canals only, ten cents per ton, payment of the said toll of ten cents a ton for passage through the Welland Canals to entitle these products to free passage through the St. Lawrence Canals.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1895.	Tons.	Tons.	Tons.
Apples	28		
Ashes	34	15	
Barley	959		7,730
Bricks		651	
Coal		7,809	603
Corn	70,235	2,912	91,743
Flour	30,916	1,824	10,265
Furniture		12	2
Glass		1	
Horses	1	1	
Hides, skins, &c.			8
Iron, railway			181
" pig	79	1,994	
" all other	1,766	1,408	214
Lard and lard oil			6
Meal, all kinds	65		46,316
Meats other than pork			30
Molasses	100		
Oats	1,654	123	16,442
Oil, in barrels	6	41	30
Pork			87
Paint	2		
Salt		36	
Stone, for cutting		430	
Seeds, all kinds			14
Steel	394		462
Sugar			59
Spirits, beer, &c.	101	84	15
Tobacco		16	
Wheat	*158,643	29,061	17,908
Wool			1,536
Merchandise not enumerated	558	1,302	7,656
Barrels, empty	1		
Sawn lumber, in vessels	1,117	492	43,286
Railway ties			1,942
Shingles		19	
Square timber, in vessels		63,715	500
Total	266,659	111,946	247,035

* Of this amount 3,469 tons came down to Kingston in 1894, were stored there and taken to Montreal in 1895; and 245 tons came down to Ogdensburg in 1894, stored there, and transhipped to Montreal in 1895.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1896.	Tons.	Tons.	Tons.
All other (vegetable)	29		
Apples	†1,263		
Ashes	94		
Barley	240		11,128
Cement and water-lime	12		
Coal		11,742	1,255
Corn	182,330	19,688	118,426
Crockery	5		
Fish		2	
Flour	11,964	13,846	16,224
Furniture		3	
Glass	9	3	
Hay, pressed		563	
Hides, skins, &c.			41
Horses	1	1	3
Iron, railway		1,192	
" pig	5	1,559	
" all other	2,020	1,725	
Lard and lard oil			1,348
Meal, all kinds		500	46,456
Molasses	167		
Oats	12,373	1,454	14,351
Oil in barrels	23		1,005
Pease	3,020	10	
Pork	1		390
Rags	4		
Rye	8,323	647	
Salt		80	
Seeds, all kinds	20		78
Steel	542	11,317	498
Sugar	1		165
Tobacco		1	
Wheat	*254,763	51,587	16,467
Wool		8	900
Merchandise not enumerated	376	54	3,990
Barrels, empty			10
Firewood, in vessels			165
Sawn lumber "	657	1,286	78,397
Shingles		94	40
Square timber, in vessels		55,588	
" rafts	1,200		
Woodenware			12
Total	479,442	172,950	311,349

† 523 tons of this quantity of apples paid full tolls by sections on the Welland Canal, and consequently does not appear on the Welland Through Statement.

* Of this amount 5,290 tons came down to Kingston in 1895, were stored there and transhipped to Montreal in 1896.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1897.	Tons.	Tons.	Tons.
Agricultural products, vegetable			32
Ashes	133		
Barley			14,173
Bricks		739	845
Clay, lime and sand	38	430	
Coal		9,803	
Corn	*264,396	11,103	115,689
Flaxseed	3,293	169	
Flour	1,029	211	7,237
Furniture	1	5	
Glass	53	9	
Hay, pressed			301
Horses	1	1	3
Hides and skins, &c			23
Iron, railway		6,241	965
" pig		2,828	
" all other	7,564	6,143	
Lard and lard oil			1,444
Meal, all kinds		699	41,644
Molasses	9		
Oats	*6,847	3,046	15,233
Oil in barrels	112	51	198
Pease	*2,078	3	
Pork			243
Rye	8,435	48	
Salt	216		
Stone for cutting		330	
Seeds, all kinds			299
Steel	375	4,680	
Sugar			31
Spirits, beer, &c	46		
Tobacco	51		
Wheat	*278,498	†39,057	12,661
Wool			197
Merchandise not enumerated	1,214	347	3,591
Firewood, in vessels		12	
Hoops	257	8	
Lumber, sawn, in vessels	478	1,158	69,710
Masts " "			403
" " rafts		5	
Railway ties, in vessels		999	
Split posts "		4	
Timber, square "	1,207	81,117	1,040
Staves and headings, salt barrel	4,716		
Woodenware			1
Total	581,047	169,246	285,963

* Of this quantity of corn 573 tons came down to Ogdensburg and Prescott in 1896, were stored there and transhipped to Montreal in 1897.

* Of this quantity of oats 50 tons came down to Prescott in 1896 and passed down to Montreal in 1897, and 170 tons passed through on St. Catharines Reports ; 136 tons of which passed down to Montreal.

* Of this quantity of pease 230 tons were transhipped and passed through on St. Catharines Reports.

* Of this quantity of wheat 624 tons were transhipped and passed through on St. Catharines Reports, and 7,072 tons came down to Kingston and Prescott in 1896 and passed down to Montreal in 1897.

† Of this quantity, 1,079 tons were transhipped and passed through on St. Catharines Reports.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1898.	Tons.	Tons.	Tons.
Agricultural products, vegetable	56		
Ashes	73		
Barley	3,966	1,417	6,909
Cement and water-lime			300
Clay, lime and sand	52	1	
Coal		4,536	759
Corn	*310,498	13,338	116,317
Flaxseed	5,687	9	
Flour	653		4,212
Furniture			2
Glass	75		
Horses	4		
Iron, railway		674	770
" pig		4,187	
" all other	6,217	257	324
" ore		13,433	
Lard and lard oil			3,671
Meal, all kinds			22,626
Molasses	56		
Oats	3,975	625	12,729
Oil, in barrels	1,141	15	119
Paint			3
Pease	260		45
Pork			1,271
Rye	*16,133	39	
Salt	144	644	
Seeds, all kinds			44
Spirits, beer, &c	4		34
Steel	1,351	3,122	2,951
Stone for cutting		554	
Tallow			359
Wheat	*184,706	15,860	8,612
Wool			89
Merchandise, not enumerated	866	25	3,828
Firewood, in vessels		747	
Lumber, sawn, in vessels	3,065	2,840	72,897
Railway ties		190	
Shingles		11	
Square timber	329	48,369	
Total	539,305	119,893	258,871

* Of this quantity of corn 2,340 tons came down to Ogdensburg and Prescott in 1897, were stored there, and transhipped to Montreal in 1898.

* Of this quantity of rye 45 tons came down to Prescott in 1897, were stored there, and transhipped to Montreal in 1898.

* Of this quantity of wheat 4,165 tons came down to Kingston in 1897, were stored there, and transhipped to Montreal in 1898.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1899.	Tons.	Tons.	Tons.
Agricultural products, vegetable	32		
Ashes	58		
Barley	596		1,828
Clay, lime and sand	15		
Coal		8,276	2,293
Corn	*150,999	16,594	43,854
Flaxseed	200		
Flour	4,229	1,889	4,404
Furniture		2	7
Glass	16		
Horses	1		
Iron, ore		26,125	
" all other	5,063		294
Lard and lard oil		3	864
Meal, all kinds			18,198
Molasses	159		8
Nails	1	1	11
Oats	*10,250	1	13,139
Oil, in barrels	7,143	2	254
Paint			2
Pork			343
Rags			1
Rye	923		
Salt	183	479	549
Seeds, all kinds			11
Spirits, beer, &c	74	71	168
Steel	3,000	1,562	11,802
Stone for cutting		429	
Tallow			201
Tobacco	96		
Wheat	*169,978	23,602	9,190
Wool			130
Merchandise, not enumerated	518	126	6,219
Barrels, empty	1		
Firewood, in vessels		27	
Hop poles		100	
Lumber, sawn, in vessels	924	4,583	57,695
Masts and spars "		3	
Railway ties "		74	1,273
Shingles		50	
Square timber, in vessels	26	24,959	
Total	354,485	108,958	172,738

* Of this quantity of corn 7,443 tons came down to Ogdensburg and Prescott in 1898, were stored there, and transhipped to Montreal in 1899.

* Of this quantity of oats 187 tons passed down from Dunnville to Montreal.

* Of this quantity of wheat 6,447 tons passed down to Kingston in 1898, were stored there, and transhipped to Montreal in 1899.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1900.	Tons.	Tons.	Tons.
Agricultural products, vegetable		1	6
Ashes	25	15	
Barley	1,288	563	1,598
Cement and water-lime			18
Clay, lime and sand	15		
Coal		1,360	992
Corn	*109,359	9,844	44,306
Flour	1,595	990	6,371
Furniture	1		
Glass, all kinds	6	4	
Horses			4
Iron, pig	508	1,284	
" all other	4,292	1,044	714
" ore		58,400	
Lard and lard oil			1,588
Meal (all kinds)			14,244
Molasses		21	57
Oats	*8,925	348	30,840
Oil, in barrels	15,647	4,288	17
Oil-cake			2,705
Paint		2	36
Pease	115		4
Pitch and tar		24	
Pork			117
Rye	3,078	160	300
Salt		467	
Soda ash		15	
Steel	5,420		2,601
Sugar			154
Tallow			631
Wheat	*121,896	6,610	7,541
White lead	16		
Merchandise not enumerated	103	154	7,899
Barrels, empty	182	407	5
Firewood, in vessels		1,143	
Lumber, sawn, in vessels	15,760	5,701	55,128
Shingles		90	
Square timber, in vessels		26,267	
Staves		3	
Total	288,231	113,205	177,876

*Of this quantity of corn 751 tons came to Ogdensburg, Kingston and Prescott in 1899, were stored there, and transhipped to Montreal in 1900.

*Of this quantity of oats 585 tons came down to Ogdensburg, Kingston and Prescott in 1899, were stored there, and transhipped to Montreal in 1900.

*Of this quantity of wheat 10,835 tons came down to Ogdensburg, Kingston and Prescott in 1900, were stored there, and transhipped to Montreal in 1900.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1901.	Tons.	Tons.	Tons.
Agricultural implements	1,785		
" products, vegetable			10
Ashes	3		
Barley			7,119
Coal		2,322	357
Corn	14,319	4,828	48,609
Flaxseed	4,965	2	
Flour	1,400	218	15,768
Furniture	5		
Glass (all kinds)	1		
Hay, pressed	246		
Iron, pig		1,790	
" all other	1,178	589	
" ore		98,452	
Lard and lard oil	1,155	827	525
Meal (all kinds)	35		13,981
Meats	114	7	
Molasses		17	
Oats	1,584	853	25,704
Oil (in barrels)	14,987	2,971	22
Oil-cake	1,083	113	219
Paint	17	6	
Pitch and tar		17	
Pork	34	970	10
Rye	2,961		
Salt	50	165	105
Soda ash	4		
Spirits, &c	32		
Sugar	112		448
Tallow			119
Tobacco, raw	23		
Wheat	*132,702	8,051	9,057
Wool			3
Merchandise not enumerated	2,420	1,395	966
Barrels, empty	66		216
Firewood, in vessels		1,287	
Lumber, sawn, in vessels	2,635	3,412	51,931
Mast spars, &c. "		13	
Shingles		18	
Square timber, in vessels	504	14,023	
Total	184,420	142,346	175,169

*Of this quantity 9,324 tons came to Ogdensburg in 1900, were stored there, and transhipped to Montreal in 1901.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhbusie and Cornwall.	Quantity passed down to United States Ports.
1902.	Tons.	Tons.	Tons.
Agricultural implements	13		399
Barley			7,418
Coal	15,976		35,562
Corn	1,719	10,335	55,593
Fish		1	
Flour	6,755	5,697	7,030
Furniture			17
Iron, railway	50		
" all other	5,785		220
" ore		3,492	18,988
Lard and lard oil			2,413
Meal, all kinds			12,675
Molasses	54	18	
Oats	1,442		9,764
Oil (in barrels)	12,091	131	1,594
Oil cake			110
Paint		20	
Pitch and tar		33	
Pork			632
Rye	4,079		
Seeds, all kinds			10
Sugar			280
Wheat	* 200,975	12,452	8,389
Wool			752
Merchandise not enumerated	419	172	1,928
Barrels (empty)	5	15	4
Firewood, in vessels		288	
Lumber, sawn, in vessels	1,085	2,178	97,300
Saw logs		28	
Square timber, in vessels		20,838	
Staves (barrel)		35	
Woodenware	17		
Total	250,475	55,733	261,078

* Of this quantity 6,096 tons were transhipped to Montreal being grain of 1901.

U.—Comparative Statement of the Quantity of Through Freight passed down the Welland Canal, &c.—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1903.	Tons.	Tons.	Tons.
Agricultural implements	46		
" products		1	
Ashes	14		
Barley	2,206	1,017	11,433
Coal		30,009	
Corn	116,223	13,846	80,689
Flax and hemp		5	
Flax seed	3,643		
Flour	16,151		6,082
Furniture	3	10	
Glass, all kinds	15		
Horses			2
Iron, railway		15	
" all other	2,542	556	
" ore		18,323	
Meal, all kinds	348		13,549
Molasses	240	16	
Nails	19		
Oats	2,438		5,315
Oil	14,619	518	2,000
Oil cake	462	792	740
Paint	5		
Pease	63		22
Pork			152
Rags	4		
Rosin	20		
Rye	4,260		644
Salt	132	2,242	
Seeds, all kinds			27
Spirits	2		3
Steel		5	
Tallow	3	15	
Wheat	* 226,746	14,199	13,725
Wool			482
Merchandise not enumerated	582	117	2,012
Firewood, in vessels		210	9
Lumber, sawn, in vessels		3,086	76,563
Shingles		54	
Timber, square, in vessels		26,324	
Total	390,786	111,360	213,449

* Of this quantity 2,890 tons were transhipped to Montreal being grain for 1902.

U.—STATEMENT showing the Quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1892.	Tons.	Tons.	Tons.
Barley			6,433
Corn	53,689	7,637	131,222
Oats			36,935
Pease	524		
Rye	9,119	273	
Wheat	194,281	5,373	26,950
Total grain	257,613	13,283	201,540
Quantity taken to Ogdensburg and transhipped to Montreal	*4,341	4,341	
Total	261,954	8,942	201,540
Other articles	5,531	60,944	128,863
Total	267,485	69,886	330 403
1893.			
Barley	600	1,110	16,751
Corn	278,564	5,752	156,776
Oats	9,761	1,090	20,313
Pease			
Rye	3,669	1	1
Wheat	209,212	17,602	29,117
Total grain	501,806	25,555	222,958
Other articles	6,210	68,182	170,790
Total	508,016	93,737	393,748
1894.			
Barley	258		28,095
Corn	60,661	3,243	105,329
Oats	175	107	27,621
Pease			
Rye			
Wheat	212,557	13,349	42,934
Total grain	273,651	16,699	203,979
Other articles	18,540	63,982	169,091
Total	292,191	80,681	373,070
1895.			
Barley	959		7,730
Corn	70,265	2,912	91,743
Oats	1,654	123	16,442
Rye			
Wheat	†158,643	29,061	17,908
Total grain	231,491	32,096	133,823
Other articles	35,168	79,850	113,212
Total	266,659	111,946	247,035

* This quantity of wheat was taken from Kingston to Ogdensburg and stored in elevators and subsequently transhipped to Montreal.

† Of this amount, 3,469 tons came down to Kingston in 1894, was stored there, and taken to Montreal in 1895, and 245 tons came down to Ogdensburg in 1894, was stored there, and transhipped to Montreal in 1895.

U.—STATEMENT showing the Quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1896.	Tons.	Tons.	Tons.
Barley	240		11,128
Corn	182,330	19,688	118,426
Oats	12,373	1,454	14,351
Pease	3,020	10	
Rye	8,323	647	
Wheat	254,763	51,587	16,467
Total grain	*461,049	73,386	160,372
Other articles	18,393	99,564	150,977
Total	749,442	172,950	311,349
1897.			
Barley			14,173
Corn	264,396	11,103	115,689
Oats	6,847	3,046	15,233
Pease	2,078	3	
Rye	8,435	48	
Wheat	278,498	39,057	12,661
Total grain	†560,254	53,257	157,756
Other articles	20,793	114,989	122,207
Total	581,047	166,246	285,963
1898.			
Barley	3,960	1,417	6,909
Corn	310,498	13,338	116,317
Oats	3,975	625	12,729
Pease	260		45
Rye	16,133	39	
Wheat	184,706	15,860	8,612
Total grain	‡519,532	31,279	144,612
Other articles	19,773	79,614	114,259
Total	539,305	110,893	258,871
1899.			
Barley	596		1,828
Corn	150,999	16,594	43,854
Oats	10,250	1	13,139
Pease			
Rye	923		
Wheat	169,978	24,602	9,190
Total grain	§332,746	40,197	68,011
Other articles	21,739	68,761	104,727
Total	354,485	108,958	172,732

* Of this amount, 5,290 tons came down to Kingston in 1895, was stored there, and transhipped to Montreal in 1896.

† Of this quantity, 7,695 tons came down in 1896 and were transhipped to Montreal in 1897.

‡ Of this quantity, 6,550 tons came down in 1897 and were transhipped to Montreal in 1898

§ Of this quantity, 14,077 tons came down in 1898 and were transhipped to Montreal in 1899.

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U.—STATEMENT showing the Quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Concluded.*

RECAPITULATION—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1900.	Tons.	Tons.	Tons.
Barley	1,288	563	1,598
Corn	109,359	9,844	44,306
Oats	8,925	348	30,840
Pease	115	.....	4
Rye	3,078	160	300
Wheat	121,896	6,610	7,541
Total grain	*244,661	17,525	84,589
Other articles	43,570	95,680	93,287
Total	288,231	113,205	177,876
1901.			
Barley	.....	.....	.....
Corn	14,319	4,828	48,609
Oats	1,584	853	25,704
Pease	.....	.....	.....
Rye	2,961	.....	.....
Wheat	132,702	8,051	9,057
Total grain	†151,566	13,732	83,370
Other articles	32,854	128,614	91,799
Total	184,420	142,346	175,169
1902.			
Barley	.....	.....	7,418
Corn	1,719	10,335	55,593
Oats	1,442	.....	9,764
Pease	.....	.....	.....
Rye	4,079	.....	.....
Wheat	200,975	12,452	8,389
Total grain	‡208,215	22,787	81,164
Other articles	42,260	32,946	179,914
Total	250,475	55,733	261,078
1903.			
Barley	2,206	1,017	11,433
Corn	116,223	13,846	80,689
Oats	2,438	.....	5,315
Pease	63	.....	22
Rye	4,260	.....	644
Wheat	226,746	14,199	13,725
Total grain	§351,936	29,062	111,828
Other articles	38,850	82,298	101,621
Total	390,786	111,360	213,449

* Of this quantity, 12,171 tons came down in 1899 and were transhipped to Montreal in 1900.
† Of this quantity, 9,324 tons came down in 1900 and were transhipped to Montreal in 1901.
‡ Of this quantity, 6,096 tons came down in 1901 and were transhipped in 1902.
§ Of this quantity, 2,890 tons came down in 1902 and were transhipped in 1903.

COMPARATIVE STATEMENT showing the Quantity of Vegetable Food and Lumber passed through the Canals during the Years ended December 31, 1902 and 1903.

	Vegetable Food.								Lumber.	Total.
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Buck-wheat.	All Other.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland Canal, 1902	22,282	225,171	67,647	7,418	11,232	4,079	.....	12,963	102,775	453,567
" 1903	25,998	259,031	210,758	14,656	7,911	4,904	.....	13,994	85,595	622,847
Increase	3,716	33,860	143,111	7,238	.....	825	.....	1,031	.....	169,280
Decrease	.....	.....	.....	.....	3,321	.....	.....	.....	17,180	.....
St. Lawrence Canals, 1902	22,599	444,261	24,366	8,255	22,840	19,738	920	4,812	27,506	575,297
" 1903	17,762	204,363	125,701	7,095	17,033	8,693	802	10,081	43,843	435,373
Increase	.....	.....	101,335	.....	.....	.....	.....	5,269	16,337	.....
Decrease	4,837	239,898	.....	1,160	5,807	11,045	118	.....	.....	139,924
Chambly Canal, 1902	793	.....	1	.....	998	.....	.....	749	26,750	29,291
" 1903	955	.....	17	.....	1,317	.....	.....	718	29,906	32,913
Increase	162	.....	16	.....	319	.....	.....	.....	3,156	3,622
Decrease	.....	.....	.....	.....	.....	.....	.....	31	.....	.....
Ottawa Canals, 1902	8	.....	.....	.....	565	.....	20	265	286,463	287,321
" 1903	78	.....	.....	.....	935	.....	7	545	332,963	334,528
Increase	70	.....	.....	.....	370	.....	.....	280	46,500	47,207
Decrease	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
Rideau Canal, 1902	487	1,041	22	122	541	28	7	98	14,194	16,540
" 1903	538	868	111	40	934	.....	2	264	17,833	20,590
Increase	51	.....	89	.....	393	.....	.....	166	3,639	4,050
Decrease	.....	173	.....	82	.....	28	5	.....	.....	.....

St. Peter's Canal, 1902	1,473			13	2,135			4,787	13,671	22,079
" 1903	2,234		273	16	2,996		2	7,014	17,639	30,174
Increase	761		273	3	861		2	2,227	3,968	8,095
Decrease										
Trent Valley Canals, 1902		1,661						6	5,501	7,171
" 1903		1,226						298	4,459	5,983
Increase								292		
Decrease		435							1,045	1,188
Murray Canal, 1902	154	684	8	1,328	159	1,164		742	1,180	5,419
" 1903	73	782	8	1,004	206	350	92	1,684	3,041	7,240
Increase		98			47		92	942	1,861	1,821
Decrease	81			324		814				
Sault Ste. Marie Canal, 1902	316,063	837,375	630	21,001	9,689	2,128		15,988	81,822	1,284,696
" " 1903	312,210	967,018	1,260	28,192	35,289	2,725	1,248	17,609	51,044	1,416,595
Increase		129,643	630	7,191	25,600	597	1,248	1,621		131,899
Decrease	3,853								30,778	
Total increase			245,454	12,866	18,462		1,206	11,797	26,458	224,862
Total decrease	4,011	76,905				10,465				

Total for year 1902 2,681,381
" 1903 2,906,243

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

CANAL

Comparative Statement for

	January.	February.	March.	April.	May.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Welland Canal, 1902				4,160 24	15,558 65
" 1903			0 42	8,012 23	20,769 75
Increase			0 42	3,851 99	5,211 10
Decrease					
St. Lawrence Canals, 1902	12 50			594 89	12,224 01
" " 1903	8 50		25 00	526 14	16,907 34
Increase			25 00		4,683 33
Decrease	4 00			68 75	
Chambly Canal, 1902				33 29	3,516 26
" 1903				30 27	2,984 25
Increase					
Decrease				3 02	532 01
Ottawa Canals, 1902				132 40	4,941 76
" 1903	75 00			17 60	5,002 99
Increase	75 00				61 23
Decrease				114 80	
Rideau Canal, 1902				47 64	693 53
" 1903					566 96
Increase					
Decrease				47 64	126 57
St. Peter's Canal, 1902	40 56		2 55	222 56	336 41
" 1903	28 34			129 17	303 74
Increase	12 22		2 55		
Decrease				93 39	32 67
Trent Valley Canal, 1902				27 58	72 43
" 1903				20 71	130 22
Increase					57 79
Decrease				6 87	
Murray Canal, 1902				46 01	89 10
" 1903				22 48	107 17
Increase					18 07
Decrease				23 53	
Sault Ste. Marie Canal, 1902					
" " 1903					
Increase					
Decrease					
Total increase	58 78		22 87	3,493 97	9,340 29
Total decrease					

Department of Railways and Canals,
Ottawa, May 16, 1904.

SESSIONAL PAPER No. 20

REVENUE.

Years ended December 31, 1902 and 1903.

June.	July.	August.	September.	October.	November.	December.	Total.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
12,183 06	15,152 28	13,341 38	11,364 73	15,853 37	9,322 57	1,905 82	98,842 10
21,919 34	17,827 43	17,115 53	15,702 06	22,063 51	12,704 40	1,082 64	137,197 31
9,736 28	2,675 15	3,774 15	4,337 33	6,210 14	3,381 83	.....	38,355 21
.....	.....	.....	.....	.....	.....	823 18	.....
8,144 93	9,023 29	10,329 63	10,819 85	8,582 88	11,034 66	820 38	71,587 02
19,988 36	21,975 31	22,566 71	19,238 41	17,540 49	11,186 79	484 51	130,447 56
11,843 43	12,952 02	12,237 08	8,418 56	8,957 61	152 13	.....	58,860 54
.....	.....	.....	.....	.....	.....	335 87	.....
2,705 56	2,905 31	3,361 07	3,969 97	3,921 01	2,310 84	.....	22,723 31
3,916 11	5,657 21	4,470 31	3,013 24	3,168 44	1,532 41	.....	24,772 24
1,210 55	2,751 90	1,109 24	.....	.....	.....	.....	2,048 93
.....	.....	.....	956 73	752 57	778 43	.....	.....
3,538 87	4,068 87	3,809 81	3,957 62	2,663 02	1,750 02	.....	24,862 37
5,626 00	4,802 80	4,572 66	3,813 03	3,384 14	2,235 99	.....	29,530 21
2,087 13	733 93	762 85	.....	721 12	485 97	.....	4,667 84
.....	.....	.....	144 59	.....	.....	.....	.....
621 16	738 67	585 14	385 89	509 21	456 47	.....	4,037 71
737 13	1,007 89	748 73	785 09	753 02	566 33	15 00	5,180 15
115 97	269 22	163 59	399 20	243 81	109 86	15 00	1,142 44
.....	.....	.....	.....	.....	.....	.....	.....
354 54	451 35	444 98	393 95	338 71	266 37	182 16	3,034 14
391 42	502 73	582 99	364 09	392 02	330 04	276 80	3,301 34
36 88	51 38	138 01	.....	53 31	63 67	94 64	267 20
.....	.....	.....	29 86	.....	.....	.....	.....
205 56	284 68	289 35	207 26	172 39	106 23	5 00	1,370 48
227 76	294 38	316 53	253 77	203 90	85 80	.....	1,533 07
22 20	9 70	27 18	46 51	31 51	.....	.....	162 59
.....	.....	.....	.....	.....	20 43	5 00	.....
110 68	182 59	202 58	168 46	162 64	101 51	7 23	1,070 80
120 90	219 09	254 81	147 43	185 85	77 25	.....	1,134 98
10 22	36 50	52 23	.....	23 21	.....	.....	64 18
.....	.....	.....	21 03	.....	24 26	7 23	.....
50	.....	.....	.....	.....	.....	.....	50 00
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
50	.....	.....	.....	.....	.....	.....	50 00
25,012 66	19,479 80	18,264 33	12,049 39	15,488 14	3,370 34	.....	105,518 93
.....	.....	.....	.....	.....	.....	1,061 64	.....

Total revenue for 1902 ..... $227,577 93
" " 1903 ..... 333,096 86

RICHARD DEVLIN, *Compiler of Canal Statistics.*

APPENDIX A.

No. (A) 1.—General Statement showing the Quantity of each Article transported on the Welland Canal and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl								14		14	14		2 80	2 80
Apples														
Agricultural products not enumerated, vegetables						1				1	1		0 20	0 20
Agricultural products not enumerated, animal			1						1		1	0 15		0 15
Agricultural implements								46		46	46		9 20	9 20
Barley		3,223				11,433				14,656	14,656		1,465 60	1,465 60
Bricks	200								200		200	23 68		23 68
Bones														
Brimstone														
Buckwheat														
Cement and water lime	1								1		1	0 15		0 15
Clay, lime and sand	325	460	11					1,567	336	2,027	2,363	19 00	149 03	168 03
Coal	3				113,076		4,796	30,009	117,875	30,009	147,884	23,575 00	6,001 80	29,576 80
Corn						108,917		101,841		210,758	210,758		21,075 80	21,075 80
Cattle														
Cotton (raw)														
Crockery and earthenware	96		62		1				159		159	23 85		23 85
Dye wood and dye stuffs														
Fish					36				36		36	5 40		5 40
Flax and hemp		5			1,900				1,900	5	1,905	285 00	0 50	285 50
Flour	21	3,936				6,082		15,959	21	25,977	25,998	0 10	4,540 23	4,540 63
Furniture								13		13	13		2 60	2 60
Gypsum														
Glass (all kinds)	20		20					15	40	15	55	6 00	3 00	9 00
Hay (pressed)														
Hogs														
Horses						2				2	2		0 40	0 40
Hides and skins, horns and hoofs														
Ice			1,080						1,080		1,080	33 13		33 13
Iron, railway	14	15			459				473	15	488	70 95	3 00	73 95

" pig	177								177		177	26 55			26 55	
" all other	1,716	5	59					3,450	1,775	3,455	5,230	251 55	646 41		897 96	
" ore		1,555						16,768		18,323	18,323		916 15		916 15	
Kryolite chemical ore and other ore, except iron																
Lard and lard oil	2		17						9		9	1 35			1 35	
Meal, all kinds	12	348				13,546		3	12	13,897	13,909	1 80	2,779 40		2,781 20	
Meats, other than pork	1								1		1	0 15			0 15	
Marble					1,460				1,460		1,460	219 00			219 00	
Manilla																
Molasses	66							256	66	256	322	9 90	51 20		61 10	
Nails	945		90					19	1,035	19	1,054	155 25	3 80		159 05	
Oats		1,119				6,112		680		7,911	7,911		802 96		802 96	
Oil (in barrels)	46	2,513			325	2,000		12,624	371	17,137	17,508	55 65	3,427 40		3,483 05	
Oil cake						740		1,254		1,994	1,994		398 80		398 80	
Pease						22		63		85	85		8 50		8 50	
Potatoes																
Pork	5		2			152			7	152	159	1 05	30 40		31 45	
Paint	47							5	47	5	52	7 05	1 00		8 05	
Pitch and tar																
Rags						4				4	4		0 80		0 80	
Rye						4,174		730		1,904	4,901		490 40		490 40	
Flax seed		724				1,591		1,325		3,643	3,643		364 30		364 30	
Rosin								20		20	20		4 00		4 00	
Salt	90	180						2,284	90	2,464	2,554	1 70	477 30		479 00	
Stone intended for cutting																
" wrought																
" not suitable for cutting, unwrought	1,356								1,356		1,356	50 64			50 64	
Seeds, all kinds	2				31	27			33	27	60	4 95	5 40		10 35	
Sheep																
Soda ash	1				31				32		32	4 80			4 80	
Steel	122				627			5	749	5	754	99 23	1 00		100 23	
Sugar	28		66		1,341				1,435		1,435	215 25			215 25	
Spirits, beer, &c	283		119			3		2	402	5	407	60 30	1 00		61 30	
Tobacco (raw)																
Tallow					88			18	88	18	106	13 20	3 60		16 80	
Tin																
Turpentine																
Wheat	1,658	163,768		1,890	3	15,436		76,276	1,661	257,370	259,031	31 55	25,939 46		25,971 01	
White lead																
Whiting																
Wool						482				182	482		96 40		96 40	
All other goods and merchandise not enumerated	1,586	735	345		29,525	2,010		442	31,456	3,187	34,643	4,707 89	554 12		5,262 01	
Bark																
Barrels, empty																
Boat knees																
Floats																
Firewood, in vessels		3,471		234						3,705	3,705		178 99		178 99	
" rafts																

No. (A) 1. —General Statement showing the Quantity of each Article transported on the Welland Canal, &c. —*Continued.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Hoops														
Hop poles									3					
Lumber, sawn, in vessels		3,870	3,501	28,226	248	48,337		1,410	3,749	81,843	85,592	674 53	14,578 62	15,253 15
" rafts	3								3		3	0 45		0 45
Masts, spars and telegraph poles, in vessels		7								7	7		0 50	0 50
" " rafts														
Railway ties, in vessels	688								688		688			
" rafts												85 00		85 00
Saw-logs	424	1,144	143						567	1,144	1,711			
Staves and headings, barrel												21 00	61 62	82 62
" " pipe														
" " W. India														
Staves, salt barrel														
Shingles		54								54	54		38 46	38 46
Split posts and fence rails, in vessels														
" " rafts														
Timber, square, in vessels		2,520						23,804		26,324	26,324		3,948 60	3,948 60
" rafts														
Traverses														
Woodenware and wood partly manufactured														
Total freight heretofore paying tolls, now free	9,938	189,652	5,506	30,350	149,151	221,074	4,796	290,902	169,391	731,978	901,369	30,742 50	89,064 75	119,807 25
Articles having paid full tolls on the St. Lawrence Canals, free:—														
Bricks	26		54						80		80			
Brimstone	3		20						23		23			
Cement and water lime	3,809		115						3,924		3,924			
Clay, lime and sand	177		4					300	181	300	481			
Coal								401		401	401			
Fish			8						8		8			
Iron, railway	39,641								39,641		39,641			
" pig	105		168						273		273			

" all other	3,791		2,054						5,845		5,845	
Steel	332								332		332	
Salt	87								87		87	
Cotton, raw	23								23		23	
Meals all kinds	17								17		17	
Seeds, all other	106		219						325		325	
Tobacco, raw	2								2		2	
Hides and skins			6						6		6	
Meats, other than pork			1						1		1	
Ashes			2						2		2	
Crockery and earthenware	32								32		32	
Furniture	1								1		1	
Glass, all kinds	169		1,038						1,207		1,207	
Molasses	5		1						6		6	
Nails	2,694		184						2,878		2,878	
Oils	7		9						16		16	
Paints	153		5						158		158	
Pitch and tar	41		17						58		58	
Rags	11		18						29		29	
Resin	1								1		1	
Soda ash	43		221						264		264	
Sugar	68		136						204		204	
Stone, unwrought		150								150	150	
Tin	28		181						209		209	
Turpentine	1								1		1	
White lead	52		28						80		80	
Whiting	12		10						22		22	
Whisky, &c	99		353						452		452	
All other goods and merchandise not enumerated	2,906		768						3,674		3,674	
Firewood in vessels			40,026						40,026		40,026	
Railway ties in vessels			611						611		611	
Grand total freight	64,380	189,802	51,763	30,350	149,151	221,074	4,796	291,603	270,090	732,829	1,002,919	

Total tolls on vessels	8,296 51	8,594 09	16,890 60
" passengers	67 82	77 22	145 04
" free goods	$11,845 56		
Total tolls	39,106 83	97,736 06	136,842 89
Fines			7 00
Damages			50 58
Harbour dues			303 60
Winterage			1 20
Other receipts			42 80
Total revenue, exclusive of hydraulic rents			137,247 89

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A.

No. (A) 2.—General Statement showing the Quantity of each Article of Through Freight transported on the Welland Canal and the Amount of Tolls, heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.	Amount of Tolls.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Up.	Down.	
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl								14		14	14		2 80	2 80
Apples														
Agricultural products, not enumerated, vegetables						1				1	1		0 20	0 20
Agricultural products, not enumerated, animals			1						1		1	0 15		0 15
Agricultural implements								46		46	46		9 20	9 20
Barley		3,223				11,433				14,656	14,656		1,465 60	1,465 60
Bricks	30								30		30	4 50		4 50
Bones														
Brimstone														
Buckwheat														
Cement and water lime	1								1		1	0 15		0 15
Clay, lime and sand	50		11						61		61	9 15		9 15
Coal	3				113,076		4,796	30,009	117,875	30,009	147,884	23,575 00	6,001 80	29,576 80
Corn						108,917		101,841		210,758	210,758		21,075 80	21,075 80
Cattle														
Cotton (raw)														
Crockery and earthenware	96		62		1				159		159	23 85		23 85
Dye wood and dye stuffs														
Fish					36				36		36	5 40		5 40
Flax and hemp		5			1,900				1,900	5	1,905	285 00	0 50	285 50
Flour		192				6,082		15,959		22,233	22,233		4,446 60	4,446 60
Furniture								13		13	13		2 60	2 60
Gypsum														
Glass (all kinds)	20		20					15	40	15	55	6 00	3 00	9 00
Hay (pressed)														
Hogs														
Horses						2				2	2		0 40	0 40
Hides and skins, horns and hoofs														
Ice														
Iron, railway	14	15			459				473	15	488	70 95	3 00	73 95

" pig	177								177		177	26 55		26 55
" all other	1,604	5	59					3,093	1,663	3,098	4,761	249 45	619 60	869 05
Iron ore		1,555						16,768		18,323	18,323		916 15	916 15
Kryolite chemical ore and other ore, except iron														
Lard and lard oil	2		7						9		9	1 35		1 35
Meal, all kinds	12	348				13,546		3	12	13,897	13,909	1 80	2,779 40	2,781 20
Meats, other than pork	1								1		1	0 15		0 15
Marble					1,460				1,460		1,460	219 00		219 00
Manilla														
Molasses	66							256	66	256	322	9 90	51 20	61 10
Nails	945		90					19	1,035	19	1,054	155 25	3 80	159 05
Oats		961				6,112		680		7,753	7,753		775 30	775 30
Oil (in barrels)	46	2,513			325	2,000		12,624	371	17,137	17,508	55 65	3,427 40	3,483 05
Oil cake						740		1,254		1,994	1,994		398 80	398 80
Pease						22		63		85	85		8 50	8 50
Potatoes														
Pork	5		2			152			7	152	159	1 05	30 40	31 45
Paint	47							5	47	5	52	7 05	1 00	8 05
Pitch and tar														
Rags						4				4	4		0 80	0 80
Rye						4,174		730		4,904	4,904		490 40	490 40
Flax seed		724				1,594		1,325		3,643	3,643		364 30	364 30
Resin								20		20	20		4 00	4 00
Salt		90						2,284		2,374	2,374		474 80	474 80
Stone intended for cutting														
" wrought														
" not suitable for cutting, unwrought														
Seeds, all kinds	2				31	27			33	27	60	4 95	5 40	10 35
Sheep														
Soda ash	1				31				32		32	4 80		4 80
Steel	22				627			5	649	5	654	97 35	1 00	98 35
Sugar	28		66		1,341				1,435		1,435	215 25		215 25
Spirits, beer, &c	283		119			3		2	402	5	407	60 30	1 00	61 30
Tobacco (raw)														
Tallow					88			18	88	18	106	13 20	3 60	16 80
Tin														
Turpentine														
Wheat		161,068		1,890	3	15,436		76,276	3	254,670	254,673	0 45	25,467 00	25,467 45
White lead														
Whiting														
Wool						482				482	482		96 40	96 40
All other goods and merchandise not enumerated	1,463	259	345		29,525	2,010		442	31,333	2,711	34,044	4,699 95	542 20	5,242 15
Bark														
Barrels, empty														
Boat knees														
Floats														
Firewood in vessels		210		9						219	219		14 60	14 60

No. (A) 2.—General Statement showing the Quantity of each through Article transported on the Welland Canal, &c.—*Continued.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Fire wood, in rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels		1,676	3,501	28,226	248	48,337		1,410	3,749	79,649	83,398	674 53	14,331 91	15,006 44
" " in rafts														
Masts, spars and telegraph poles, in vessels														
Masts, spars and telegraph poles in rafts														
Railway ties, in vessels	375								375		375	60 00		60 00
" in rafts														
Saw logs														
Staves and heading, barrel														
" " pipe														
" " W. India														
Staves, salt barrel														
Shingles		54								54	54		38 46	38 46
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels		2,520						23,804		26,324	26,324		3,948 60	3,948 60
" in rafts														
Traverses														
Woodenware and wood partly manufactured														
Total freight paying tolls.	5,293	175,418	4,283	30,125	149,151	221,074	4,796	288,978	163,523	715,595	879,118	30,538 13	87,807 52	118,345 65
Articles having paid full tolls on the St. Lawrence Canals, free:—														
Bricks	26		54						80		80			
Brimstone	3		20						23		23			
Cement and water lime	3,809		115						3,924		3,924			

Clay, lime and sand	177		4						181		181			
Fish			8						8		8			
Iron, railway	39,641								39,641		39,641			
" pig	105		168						273		273			
" all other	3,791		2,054						5,845		5,845			
Steel	332								332		332			
Salt	87								87		87			
Cotton, raw	23								23		23			
Meals, all kinds	17								17		17			
Seeds, all other	106		219						325		325			
Tobacco, raw	2								2		2			
Hides and skins			6						6		6			
Meats, other than pork			1						1		1			
Ashes, pot and pearl			2						2		2			
Crockery and earthenware	32								32		32			
Furniture	1								1		1			
Glass, all kinds	169		1,038						1,207		1,207			
Molasses	5		1						6		6			
Nails	2,694		184						2,878		2,878			
Oils	7		9						16		16			
Paint	153		5						158		158			
Pitch and tar	41		17						58		58			
Rags	11		18						29		29			
Resin	1								1		1			
Soda, ash	43		221						264		264			
Sugar	68		136						204		204			
Tin	28		181						209		209			
Turpentine	1								1		1			
White lead	52		28						80		80			
Whiting	12		10						22		22			
Whisky, &c	99		353						452		452			
All other goods and merchandise not enumerated	2,906		768						3,674		3,674			
Firewood, in vessels			40,026						40,026		40,026			
Railway ties, in vessels			611						611		611			
Grand total through freight	59,735	175,418	50,540	30,125	149,151	221,074	4,796	288,978	264,222	715,595	979,817			
												Total tolls on vessels	8,122 35	8,167 81	6,1290 61
												" passengers	67 75	77 15	144 90
												" Free goods	11,775 46		
												Total through tolls	38,728 23	96,052 48	134,780 71

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 3.—General Statement showing the Quantity of each Article of Way Freight transported on the Welland Canal and the Amount of Tolls heretofore collected, now free, during the season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl														
Apples														
Agricultural products not enumerated, vegetables														
Agricultural products not enumerated, animal														
Agricultural implements														
Barley														
Bricks	170								170		170	19 18		19 18
Bones														
Brimstone														
Buckwheat														
Cement and water lime														
Clay, lime and sand	275	460						1,567	275	2,027	2,302	9 85	149 03	158 88
Coal														
Corn														
Cattle														
Cotton (raw)														
Crockery and earthenware														
Dye wood and dye stuffs														
Fish														
Flax and hemp														
Flour	21	3,744							21	3,744	3,765	0 40	93 63	94 03
Furniture														
Gypsum														
Glass (all kinds)														
Hay (pressed)														
Hogs														
Horses														

Hides and skins, horns and hoofs														
Ice			1,080						1,080		1,080	33 13		33 13
Iron, railway														
" pig														
" all other	112							357	112	357	469	2 10	26 81	28 91
Iron ore														
Kryolite chemical ore and other ore, except iron														
Lard and lard oil														
Meal, all kinds														
Meats, other than pork														
Marble														
Manilla														
Molasses														
Nails														
Oats		158								158	158		27 66	27 66
Oil (in barrels)														
Oil cake														
Pease														
Potatoes														
Pork														
Paint														
Pitch and tar														
Rags														
Rye														
Flaxseed														
Resin														
Salt	90	90							90	90	180	1 70	2 50	4 20
Stone intended for cutting														
" wrought														
" not suitable for cutting, unwrought	1,356								1,356		1,356	50 64		50 64
Seeds, all kinds														
Sheep														
Soda ash														
Steel	100								100		100	1 88		1 88
Sugar														
Spirits, beer, &c														
Tobacco (raw)														
Tallow														
Tin														
Turpentine														
Wheat	1,658	2,700							1,658	2,700	4,358	31 10	472 46	503 56
White lead														
Whiting														
Wool														
All other goods and merchandise not enumerated	123	476							123	476	599	7 94	11 92	19 86
Bark														

No. (A) 3—General Statement showing the Quantity of each Article of Way Freight transported on the Welland Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls Up.	Amount of Tolls Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels empty														
Boat knees														
Floats														
Firewood, in vessels		3,261		225						3,486	3,486		164 39	164 39
" rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels		2,194								2,194	2,194		246 71	246 71
" " rafts	3								3		3	0 45		0 45
Masts, spars and telegraph poles, in vessels		7								7	7		0 50	0 50
Masts, spars and telegraph poles, in rafts														
Railway ties, in vessels	313								313		313	25 00		25 00
" rafts														
Saw logs	424	1,144	143						567	1,144	1,711	21 00	61 62	82 62
Staves and headings, barrel														
" " pipe														
" " W. India														
Staves, salt barrel														
Shingles														
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels														
" " rafts														
Traverses														
Woodenware and wood partly manufactured														
Total freight paying tolls	4,645	14,234	1,223	225				1,924	5,868	16,383	22,251	204 37	1,257 23	1,461 60

Free articles for canal construction, O.C., 1884—														
Clay, lime and sand								300		300	300			
Coal								401		401	401			
Stone, unwrought		150								150	150			
Grand total, freight..	4,645	14,384	1,223	225				2,625	5,868	17,234	23,102			
Total tolls on vessels												174 16	426 28	600 44
" passengers												0 07	0 07	0 14
" free goods, $70.10														
Total way tolls												378 60	1,683 58	2,062 18

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 4.—General Statement showing the Quantity of each Article transported on the St. Lawrence Canals and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports		From United States to United States Ports.		From United States to Canadian Ports		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl	163	12	2						165	12	177	42 59	2 40	44 99
Apples	57	7,870			65				122	7,870	7,992	7 86	1,092 99	1,100 85
Agricultural products not enumerated—														
Vegetable	218	2,141							218	2,141	2,359	25 51	317 85	343 36
Animal	1,857	3,375			2				1,859	3,375	5,234	80 52	480 89	561 41
Agricultural implements	115	68							115	68	183	14 75	4 55	19 30
Barley		7,095								7,095	7,095		555 75	555 75
Bricks	7,997	64	184				126		8,307	64	8,371	497 81	2 42	500 23
Bones		394								394	394		52 72	52 72
Brimstone	1,966	17	31						1,997	17	2,014	202 88	1 21	204 09
Buckwheat		802								802	802		56 69	56 69
Cement and water lime	8,140	422	467						8,607	422	9,029	1,129 59	17 21	1,146 80
Clay, lime and sand	22,218	28,122	4				3,513		25,735	28,122	53,857	1,045 51	1,318 89	2,364 40
Coal	55	78,007				4,784		233,577	55	316,368	316,423	6 19	44,967 38	44,973 49
Corn	4,157	115,674						5,870	4,157	121,544	125,701	508 69	3,498 69	4,007 38
Cattle	59	364							59	364	423	2 63	25 82	28 45
Cotton (raw)	23	2							23	2	25	3 45	0 13	3 58
Crockery and earthenware	242	188							242	188	430	41 81	36 85	78 66
Dye wood and dye stuffs	48	14					6		54	14	68	5 34	2 40	7 74
Fish	122	8	15						137	8	145	14 06	0 32	14 38
Flax and hemp	43	6	34						77	6	83	11 55	0 90	12 45
Flour	1,523	16,239							1,523	16,239	17,762	111 71	1,246 87	1,358 58
Furniture	513	1,443	10						523	1,443	1,966	89 91	229 15	319 06
Gypsum	1,123								1,123		1,123	14 11		14 11
Glass (all kinds)	1,349	165	1,325						2,674	165	2,839	527 18	27 30	554 48
Hay (pressed)	5,055	2,379							5,055	2,379	7,434	189 87	157 13	347 00
Hogs	12	17							12	17	29	0 48	0 96	1 44
Horses	405	801			11				416	801	1,217	20 11	49 88	69 99

Hides and skins, horns and hoofs	30	43							30	43	73	2 71	2 10	4 81
Ice															
Iron, railway	43,009	468							43,009	468	43,477	6,435 81	41 86	6,477 67
" pig	3,462		302				672		4,436		4,436	563 79		563 79
" all other	32,197	1,637	2,097					185	34,294	1,822	36,116	2,758 43	148 14	2,906 57
" ore															
Kryolite chemical ore and other ore, except iron		464								464	464		23 20	23 20
Lard and lard oil	89	416							89	416	505	10 99	58 18	69 17
Meal, all kinds	108	475			12				120	475	595	10 91	32 04	42 95
Meats, other than pork	45	44							45	44	89	4 88	4 60	9 48
Marble	5	2							5	2	7	0 30	0 40	0 70
Manilla	36	12	29						65	12	77	12 37	2 40	14 77
Molasses	400	134	2				124		526	134	660	65 36	6 70	72 06
Nails	4,310	607	131						4,441	607	5,048	870 69	42 80	913 49
Oats	93	16,939			1				94	16,939	17,033	4 83	1,027 53	1,032 36
Oil (in barrels)	925	1,424	125				6		1,056	1,424	2,480	187 95	228 85	416 80
Oil cake	16	9,425							16	9,425	9,441	1 57	472 03	473 60
Pease	9	1,337							9	1,337	1,346	0 68	104 17	104 85
Potatoes	70	78							70	78	148	3 71	6 04	9 75
Pork	295	588							295	588	883	26 89	38 70	65 59
Paint	1,054	348	36				81		1,171	348	1,519	215 10	57 60	272 70
Pitch and tar	256	32	39				147		442	32	474	54 57	2 95	57 52
Rags	385	78	33				141		559	78	637	62 40	12 00	74 40
Rye		8,072						621		8,693	8,693		392 04	392 04
Flax seed	12	6,747							12	6,747	6,759	1 35	168 70	170 05
Resin	302	21	2				1,606		1,910	21	1,931	105 29	1 05	106 34
Salt	4,528	543					336		4,864	543	5,407	534 52	26 24	560 76
Stone intended for cutting	17	155							17	155	172	1 51	5 82	7 33
" wrought	80	3							80	3	83	5 12	0 60	5 72
" not suitable for cutting, unwrought		9,867								9,867	9,867		201 15	201 15
Seeds, all kinds	6,004	98	209						6,213	98	6,311	293 24	10 50	303 74
Sheep	23	78							23	78	101	0 96	5 96	6 92
Soda ash	703	7	658						1,361	7	1,368	270 68	0 65	271 33
Steel	5,716	38	33						5,749	38	5,787	403 51	5 48	408 99
Sugar	2,210	321	227				56		2,493	321	2,814	448 59	28 95	477 54
Spirits, beer, &c	1,560	563	332					19	1,892	582	2,474	273 12	89 10	362 22
Tobacco (raw)	37	7							37	7	44	4 88	0 39	5 27
Tallow		2								2	2		0 30	0 30
Tin	527	56	278						805	56	861	150 50	10 90	161 40
Turpentine	29	2					42		71	2	73	7 44	0 10	7 54
Wheat	483	201,952						1,928	483	203,880	204,363	54 23	6,864 68	6,918 91
White lead	266	34	55						321	34	355	60 75	5 45	66 20
Whiting	530	1	304						834	1	835	166 50	0 05	166 55
Wool	5		15						20		20	2 85		2 85
All other goods and merchandise, not enumerated	17,398	10,533	1,547		247	810	2,733	92	21,925	11,435	33,360	3,259 86	1,633 75	4,893 61
Bark															

No. (A) 4.—General Statement showing the Quantity of each Article transported on the St. Lawrence Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States. to United States. Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels, empty	1,269	70							1,269	70	1,339	156 12	5 49	161 61
Boat knees														
Floats														
Firewood, in vessels	12,540	2,302	105,615						118,155	2,302	120,457	7,501 70	59 34	7,561 04
" rafts														
Hoops														
Hop poles	2								2		2	0 10		0 10
Lumber sawn, in vessels	33,384	8,543	415			67	278		34,077	8,610	42,687	955 51	284 58	1,240 09
" " rafts		1,156								1,156	1,156		35 22	35 22
Masts, spars, and telegraph poles, in vessels														
Masts, spars, and telegraph poles, in rafts		20,518								20,518	20,518		512 95	512 95
Railway ties, in vessels														
" rafts			611						611		611	48 88		48 88
Sawlogs														
Staves and headings, barrel		81								81	81		14 42	14 42
" " pipe														
" " West India														
Staves, salt barrel														
Shingles	4	70							4	70	74	0 75	14 53	15 28
Split posts and fence rails, in vessels		10								10	10		1 00	1 00
Split posts and fence rails, in rafts														
Timber, square, in vessels		200						660		860	860		35 50	35 50
" " rafts		3,117	2,240						2,240	3,117	5,357	56 00	79 26	135 26
Traverses														
Woodenware and wood partly manufactured	40	5							40	5	45	15 20	1 00	16 20
Total, freight paying tolls	231,923	575,412	117,407		338	5,661	9,867	242,952	359,535	825,025	1,183,560	30,667 21	66,954 71	97,621 92

Articles having passed down the full length of Welland Canal (Free).												
Agricultural implements								58		58	58	
Ashes								2		2	2	
Barley		2,206								2,206	2,206	
Corn		64,668						59,196		123,684	123,684	
Flax-seed		2,318						1,325		3,643	3,643	
Flour		101						16,050		16,151	16,151	
Furniture								3		3	3	
Glass								15		15	15	
Iron (all other)		20						2,522		2,542	2,542	
Meal		348								348	348	
Merchandise		259						323		582	582	
Molasses								240		240	240	
Nails								19		19	19	
Oats		1,646						792		2,438	2,438	
Oil cake								462		462	462	
Oils		2,513						12,106		14,619	14,619	
Paint								5		5	5	
Pease								63		63	63	
Rags								4		4	4	
Resin								20		20	20	
Rye		730						3,530		4,260	4,260	
Salt								132		132	132	
Tallow								3		3	3	
Wheat		201,812						24,934		226,746	226,746	
Whisky								2		2	2	
Coal, free per O. C	90,928	157					8,134		99,062	157	99,219	
Grand total, freight	322,851	852,190	117,407		338	5,661	18,001	364,758	458,597	1,222,609	1,681,206	

Total tolls on vessels		10,998 15	9,306 78	20,304 93
" " passengers		1,795 59	3,467 03	5,262 62
" " free goods	$48,618 93			
Total, tolls		43,460 95	78,728 52	123,189 47
Fines				70 00
* Damages				
Wharfage and storage				2,373 11
Other receipts				4,814 98
Total revenue, exclusive of hydraulic rents				130,447 56

* Amount of damages not included in above, $983.67.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 5.—General Statement showing the Quantity of each Article of Through Freight transported on the St. Lawrence Canals, and the Amount of Tolls heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl	38	12	2						40	12	52	8 00	2 40	10 40
Apples		6,977								6,977	6,977		1,046 60	1,046 60
Agricultural products not enumerated, vegetable	105	2,068							105	2,068	2,173	15 75	310 20	325 95
Agricultural products not enumerated, animal		3,075								3,075	3,075		461 25	461 25
Agricultural implements		7								7	7		1 40	1 40
Barley		5,043								5,043	5,043		504 30	504 30
Bricks	1,174		184						1,358		1,358	203 70		203 70
Bones														
Brimstone	29		31						60		60	9 00		9 00
Buckwheat		488								488	488		48 80	48 80
Cement and water lime	6,033	5	467						6,500	5	6,505	975 00	0 75	975 75
Clay, lime and sand	344	210	4						348	210	558	52 20	31 50	83 70
Coal		72,469						218,079		290,548	290,548		43,555 73	43,555 73
Corn	2,984	1,866						3,353	2,984	5,219	8,203	447 60	521 90	969 50
Cattle														
Cotton, raw	23								23		23	3 45		3 45
Crockery and earthenware	97	183							97	183	280	19 40	36 60	56 00
Dye wood and dye stuffs	12	10							12	10	22	2 40	2 40	4 40
Fish	5		15						20		20	3 00		3 00
Flax and hemp	43	6	34						77	6	83	11 55	0 90	12 45
Flour	51	4,595							51	4,595	4,646	7 65	689 25	696 90
Furniture	303	1,018	10						313	1,018	1,331	62 60	203 60	266 20
Gypsum														
Glass, all kinds	1,118	121	1,325						2,443	121	2,564	488 60	24 20	512 80
Hay, pressed														
Hogs														
Horses		81								81	81		12 15	12 15

Hides and skins, horns and hoofs	8	3							8	3	11	1 20	0 45	1 65
Ice														
Iron, railway	42,806	164							12,806	164	42,970	6,420 90	24 60	6,445 50
" pig	2,940		302						3,242		3,242	486 30		486 30
" all other	9,326	457	2,097					185	11,423	642	12,065	1,713 45	96 30	1,809 75
" ore														
Kryolite chemical ore and other ore, except iron		464								464	464		23 20	23 20
Lard and lard oil	43	376							43	376	419	6 45	56 40	62 85
Meal, all kinds	40	104							40	104	144	6 00	15 60	21 60
Meats, other than pork	13	19							13	19	32	1 95	2 85	4 80
Marble		2								2	2		0 40	0 40
Manilla		12	29						29	12	41	5 80	2 40	8 20
Molasses			2						2		2	0 40		0 40
Nails	3,916	83	131						4,047	83	4,130	809 40	16 60	826 00
Oats		7,822								7,822	7,822		782 20	782 20
Oil, in barrels	541	1,020	125						666	1,020	1,686	133 20	204 00	337 20
Oil cake		8								8	8		1 20	1 20
Pease		929								929	929		93 65	93 65
Potatoes		3								3	3		0 45	0 45
Pork		88								88	88		13 20	13 20
Paint	910	262	36						946	262	1,208	189 20	52 40	241 60
Pitch and tar	133	9	39						172	9	181	34 40	1 80	36 20
Rags	89	47	33						122	47	169	24 40	9 40	33 80
Rye		1,708						621		2,329	2,329		232 90	232 90
Flax seed	6								6		6	0 90		0 90
Resin	61		2						63		63	12 60		12 60
Salt	1,666	50							1,666	50	1,716	249 90	7 50	257 40
Stone intended for cutting														
" wrought	4	3							4	3	7	0 80	0 60	1 40
" not suitable for cutting, unwrought		64								64	64		5 10	5 10
Seeds, all kinds	314	58	209						523	58	581	78 45	8 70	87 15
Sheep														
Soda ash	671	2	658						1,329	2	1,331	265 80	0 40	266 20
Steel	1,577	29	33						1,610	29	1,639	241 50	4 35	245 85
Sugar	1,521	82	227						1,748	82	1,830	349 60	16 40	366 00
Spirits, beer, &c	278	365	332					19	610	384	994	122 00	76 80	198 80
Tobacco, raw	24	1							24	1	25	3 60	0 15	3 75
Tallow		2								2	2		0 30	0 30
Tin	369	49	278						647	49	696	129 40	9 80	139 20
Turpentine	1								1		1	0 20		0 20
Wheat	240	21,637						1,928	240	23,565	23,805	36 00	2,356 50	2,392 50
White lead	115	16	55						170	16	186	34 00	3 20	37 20
Whiting	509		304						813		813	162 60		162 60
Wool	3		15						18		18	2 70		2 70
All other goods and merchandise not enumerated	10,148	6,425	1,539					78	11,687	6,503	18,190	2,337 00	1,300 60	3,637 60
Bark														

No. (A) 5.—General Statement showing the Quantity of each Article of Through Freight transported on the St. Lawrence Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		From United States to United States Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels, empty	541	3							541	3	544	107 40	52	107 92
Boat knees														
Floats														
Firewood, in vessels	5,034		105,615						110,649		110,649	7,376 60		7,376 60
" " rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels	7		415						422		422	37 95		37 95
" " rafts														
Masts, spars, and telegraph poles, in vessels														
Masts, spars, and telegraph poles, in rafts														
Railway ties, in vessels														
" " rafts			611						611		611	48 88		48 88
Saw logs														
Staves and headings, barrel		70								70	70		14 00	14 00
" " pipe														
" " West India														
Staves, salt barrel														
Shingles														
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels								660		660	660		33 00	33 00
" rafts														
Traverses														
Woodenware and wood partly manufactured	36								36		36	14 40		14 40

Total freight ordinarily subject to tolls (now exempt)	96,249	140,670	115,159					224,923	211,408	365,593	577,001	23,755 23	52,921 45	76,676 68
Articles having passed down the full length of the Welland Canal, free:—														
Agricultural implements								46		46	46			
Ashes								14		14	14			
Barley		2,206								2,206	2,206			
Corn		64,402						51,821		116,223	116,223			
Flax seed		2,318						1,325		3,643	3,643			
Flour		101						16,050		16,151	16,151			
Furniture								3		3	3			
Glass								15		15	15			
Iron, all other		20						2,522		2,542	2,542			
Meal		348								348	348			
Merchandise		259						323		582	582			
Molasses								240		240	240			
Nails								19		19	19			
Oats		1,646						792		2,438	2,438			
Oil cake								462		462	462			
Oils		2,513						12,106		14,619	14,619			
Paint								5		5	5			
Pease								63		63	63			
Rags								4		4	4			
Resin								20		20	20			
Rye		730						3,530		4,260	4,260			
Salt								132		132	132			
Tallow								3		3	3			
Wheat		201,812						21,934		226,746	226,746			
Whisky								2		2	2			
Coal, free per O.C.	30								30		30			
Grand total freight	96,279	417,025	115,159					339,354	211,438	756,379	967,817			
Total tolls on vessels												6,567 32	6,718 75	13,286 07
" passengers												798 65	2,166 60	2,965 25
" free goods $41,896·65														
Total through tolls												31,121 20	61,806 80	92,928 00

RICHARD DEVLIN,
Compiler of Canal Statistics.

Department of Railways and Canals,
Ottawa, May 16, 1904.

APPENDIX A—*Continued*

No. (A) 6.—General Statement showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, and the Amount of Tolls heretofore collected, now free, during the Season of Navigation in 1903—*Continued.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl	125								125		125	34 59		34 59
Apples	57	893			65				122	893	1,015	7 86	46 39	54 25
Agricultural products not enumerated, vegetables	113	73							113	73	186	9 76	7 65	17 41
Agricultural products not enumerated, animal	1,857	300			2				1,859	300	2,159	80 52	19 64	100 16
Agricultural implements	115	61							115	61	176	14 75	3 15	17 90
Barley		2,052								2,052	2,052		51 45	51 45
Bricks	6,823	64					126		6,949	64	7,013	294 11	2 42	296 53
Bones		394								394	394		52 72	52 72
Brimstone	1,937	17							1,937	17	1,954	193 88	1 21	195 09
Buckwheat		314								314	314		7 89	7 89
Cement and water lime	2,107	417							2,107	417	2,524	154 59	16 46	171 05
Clay, lime and sand	21,874	27,912					3,513		25,387	27,912	53,299	993 31	1,287 39	2,280 70
Coal	55	5,538				4,784		15,198	55	25,820	25,875	6 19	1,411 57	1,417 76
Corn	1,173	113,808						2,517	1,173	116,325	117,498	61 09	2,976 79	3,037 88
Cattle	59	364							59	364	423	2 63	25 82	28 45
Cotton (raw)		2								2	2		0 13	0 13
Crockery and earthenware	145	5							145	5	150	22 41	0 25	22 66
Dye wood and dye stuffs	36	4					6		42	4	46	2 94	0 40	3 34
Fish	117	8							117	8	125	11 06	0 32	11 38
Flax and hemp														
Flour	1,472	11,644							1,472	11,644	13,116	104 06	557 62	661 68
Furniture	210	425							210	425	635	27 31	25 55	52 86
Gypsum	1,123								1,123		1,123	14 11		14 11
Glass (all kinds)	231	44							231	44	275	38 58	3 10	41 68
Hay (pressed)	5,055	2,379							5,055	2,379	7,434	189 87	157 13	347 00
Hogs	12	17							12	17	29	0 48	0 96	1 44
Horses	405	720			11				416	720	1,136	20 11	37 73	57 84

Hides and skins, horns and hoofs	22	40							22	40	62	1 51	1 65	3 16		
Ice																
Iron, railway	203	304							203	304	507	14 91	17 26	32 17		
" pig	522						672		1,194		1,191	77 49		77 49		
" all other	22,871	1,180							22,871	1,180	24,051	1,044 98	51 84	1,096 82		
" ore																
Kryolite chemical ore and other ore, except iron																
Lard and lard oil	46	40							46	40	86	4 54	1 78	6 32		
Meal, all kinds	68	371			12				80	371	451	4 91	16 44	21 35		
Meats, other than pork	32	25							32	25	57	2 93	1 75	4 68		
Marble	5								5		5	0 30		0 30		
Manilla	36								36		36	6 57		6 57		
Molasses	400	134					121		524	134	658	64 96	6 70	71 66		
Nails	394	524							394	524	918	61 29	26 20	87 49		
Oats	93	9,117			1				94	9,117	9,211	4 83	245 33	250 16		
Oil (in barrels)	384	401					6		390	404	794	54 75	24 85	79 60		
Oil cake	16	9,417							16	9,417	9,433	1 57	470 83	472 40		
Pease	9	408							9	408	117	0 68	10 52	11 20		
Potatoes	70	75							70	75	145	3 71	5 59	9 30		
Pork	295	500							295	500	795	26 89	25 50	52 39		
Paint	144	86					84		225	86	311	25 90	5 20	31 10		
Pitch and tar	123	23					147		270	23	293	20 17	1 15	21 32		
Rags	296	31					141		437	31	168	38 00	2 60	40 60		
Rye		6,364								6,364	6,364		159 14	159 14		
Flax seed	6	6,747							6	6,747	6,753	0 45	168 70	169 15		
Resin	241	21					1,606		1,847	21	1,868	92 69	1 05	93 74		
Salt	2,862	493					336		3,198	493	3,691	284 62	18 76	303 36		
Stone intended for cutting	17	155							17	155	172	1 51	5 82	7 33		
" wrought	76								76		76	4 32		4 32		
" not suitable for cutting, unwrought		9,803								9,803	9,803		196 05	196 05		
Seeds, all kinds	5,690	40							5,690	40	5,730	214 79	1 90	216 59		
Sheep	23	78							23	78	101	0 96	5 96	6 92		
Soda ash	32	5							32	5	37	4 88	0 25	5 13		
Steel	4,139	9							4,139	9	4,148	162 01	1 13	163 14		
Sugar	689	239					56		745	239	984	98 99	12 55	111 54		
Spirits, beer, &c	1,282	198							1,282	198	1,480	151 12	12 30	163 42		
Tobacco, raw	13	6							13	6	19	1 28	0 24	1 52		
Tallow																
Tin	158	7							158	7	165	21 10	1 10	22 20		
Turpentine	28	2					42		70	2	72	7 24	0 10	7 34		
Wheat	243	180,315							243	180,315	180,558	18 23	1,508 18	4,526 41		
White lead	151	18							151	18	169	26 75	2 25	29 00		
Whiting	21	1							21	1	22	3 90	0 05	3 95		
Wool	2								2		2	0 15		0 15		
All other goods and merchandise not enumerated	7,250	4,108	8		247	840	2,733	14	10,238	4,932	15,170	922 86	333 15	1,256 01		
Bark																

No. (A) 6. GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, and the Amount of Tolls collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels empty	728	67							728	67	795	48 72	4 97	53 69
Boat knees														
Floats														
Firewood, in vessels	7,506	2,302							7,506	2,302	9,808	125 10	59 34	184 44
" rafts														
Hoops														
Hop poles	2								2		2	0 10		0 10
Lumber, sawn, in vessels	33,377	8,543				67	278		33,655	8,610	42,265	917 56	284 58	1,202 14
" " rafts		1,156								1,156	1,156		35 22	35 22
Masts, spars and telegraph poles, in vessels														
Masts, spars and telegraph poles, in rafts		20,518								20,518	20,518		512 95	512 95
Railway ties, in vessels														
" " rafts														
Saw logs														
Staves and headings, barrel		11								11	11		0 42	0 42
" " pipe														
" " West India														
Staves, salt barrel														
Shingles	4	70							4	70	74	0 75	14 53	15 28
Split posts and fence rails, in vessels		10								10	10		1 00	1 00
Split posts and fence rails, in rafts														
Timber, square, in vessels		200								200	200		2 50	2 50
" rafts	2,240	3,117							2,240	3,117	5,357	56 00	79 26	135 26
Traverses														
Woodenware and wood partly manufactured	4	5							4	5	9	0 80	1 00	1 80

Total freight heretofore paying tolls, now free....	235,674	434,742	2,248	.....	338	5,661	9,867	18,029	148,127	458,432	606,559	6,911 98	14,033 26	20,945 24
Free articles, having paid full tolls on Welland Canal :—														
Corn.....	....	266	.....	.. ..	....	.....	.....	7,375	.....	7,641	7,641			
Coal, free, per Order in Council.....	90,898	157	.....	....	.....	.....	8,134	.....	99,032	157	99,189			
Grand total way freight....	326,572	435,165	2,248	... ...	338	5,661	18,001	25,404	247,159	466,230	713,389			
Total tolls on vessels.....												4,430 83	2,588 03	7,018 86
" passengers.....												996 94	1,300 43	2,297 37
" free goods.....$6,722 28												.... . .	....	.....
Total way tolls.. ...												12,339 75	17,921 72	30,261 47

DEPARTMENT OF RAILWAYS AND CANALS.
OTTAWA, May 16, 1904.

RICHARD DEVLIN.
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 7.—General Statement showing the Quantity of each Article transported on the Ottawa Canals, and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples		249								249	249	14 69
Agricultural products not enumerated, vegetables		13								13	13	1 14
" " " animal		3,119								3,119	3,119	271 92
Agricultural implements	1	13							1	13	14	2 07
Barley												
Bricks	2								2		2	0 12
Bones		5								5	5	0 30
Brimstone												
Buckwheat		7								7	7	0 69
Cement and water Lime	176								176		176	3 52
Clay, lime and sand	220	12,953							220	12,953	13,173	771 41
Coal	397	155							397	155	552	22 29
Corn												
Cattle		586								586	586	46 73
Cotton (raw)												
Crockery and earthenware	1	38							1	38	39	7 18
Dye wood and dye stuffs		2								2	2	0 38
Fish		5								5	5	0 30
Flax and hemp												
Flour	4	74							4	74	78	6 20
Furniture		100								100	100	12 10
Gypsum												
Glass (all kinds)	2	79							2	79	81	14 46
Hay (pressed)		3,068		354						3,422	3,422	322 98
Hogs		135								135	135	10 53
Horses	15	244							15	244	259	13 68
Hides and skins, horns and hoofs		17								17	17	1 70
Ice												

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No. (A) 7.—General Statement showing the Quantity o each Article transported on the Ottawa Canals, and the Amount of Reveuue Collected, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Hop poles												
Lumber, sawn, in vessels		293,927		38,636						332,563	332,563	23,501 60
" " rafts		400								100	400	42 00
Masts, spars and tolegraph poles, in vessels												
" " " rafts												
Railway ties, in vessels		139								139	139	12 41
" " rafts												
Saw logs	50	723							50	723	773	17 00
Staves and headings, barrel												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles		14								14	14	2 68
Split posts and fence rails, in vessels												
" " " rafts												
Timber, square, in vessels		2,160								2,160	2,160	30 71
" " rafts		1,454								1,454	1,454	16 29
Traverses												
Woodenware and wood partly manufactured												
Total freight paying tolls	922	368,711		38,990					922	407,701	408,623	26,392 62
Free per Order in Council.												
Floats		15,330								15,330	15,330	
Lumber, sawn, in rafts		120								120	120	
Timber, square, "		12,400								12,400	12,400	
Freight, grand total	922	396,561		38,990					922	435,551	436,473	

Total tolls, on vessels			2,827 24
" passengers			219 35
" free goods		$ 335 19	
Total tolls			29,439 21
Other receipts			
Total revenue exclusive of hydraulic rents			29,439 21

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. 8 (A).—General Statement showing the Quantity of each Article transported on the Chambly Canal, and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples	6	686					7		6	693	699	47 64
Agricultural products not enumerated, vegetables		4								4	4	40
" " " animal												
Agricultural implements	75	14							75	14	89	3 75
Barley												
Bricks	1		20				17		21	17	38	2 41
Bones		3								3	3	20
Brimstone												
Buckwheat												
Cement and water lime	1,679						23		1,679	23	1,702	114 25
Clay, lime and sand	120						23,318		120	23,318	23,438	1,843 13
Coal	884	26					78,984		884	79,010	79,894	7,779 94
Corn		17								17	17	1 70
Cattle	9	176					2		9	178	187	6 57
Cotton (raw)												
Crockery and earthenware		51								51	51	5 10
Dye wood and dye stuffs							33			33	33	3 30
Fish												
Flax and hemp												
Flour	908	12					35		908	47	955	33 45
Furniture							4			4	4	40
Gypsum												
Glass (all kinds)												
Hay (pressed)	177	3,943	30,494				242		30,671	4,185	34,856	2,879 46
Hogs												
Horses	15	22							15	22	37	1 35
Hides and skins, horns and hoofs												
Ice												
Iron, railway	35						334		35	334	369	34 59

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No. 8 (A).—General Statement showing the Quantity of each Article transported on the Chambly Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Lumber, sawn, in vessels	476	25	29,430					110	29,906	135	30,041	1,764 83
" rafts												
Masts, spars, and telegraph poles, in vessels												
" " rafts		63								63	63	2 10
Railway ties, in vessels			1,238						1,238		1,238	98 81
" rafts												
Saw logs												
Staves and headings, barrels												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles	83		8						91		91	20 77
Split posts and fence rails, in vessels												
" " rafts												
Timber, square, in vessels		44						700		744	744	27 49
" rafts		256								256	256	8 55
Traverses												
Woodenware and wood partly manufactured												
Total freight	6,534	7,975	218,567					113,495	225,101	121,470	346,571	21,124 69

Total tolls on vessels	3,601 75
" passengers	32 80
Total toll	24,759 24
*Damages	*
Fines	10 00
Other receipts	3 00
Total revenue, exclusive of hydraulic rents	24,772 24

* Amount of damages, not included in above, $5.

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. 9—General Statement showing the Quantity of each Article transported on the Rideau Canal, and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples	28	53							28	53	81	2 18
Agricultural products not enumerated, vegetables	5	9							5	9	14	0 40
" " " animal,	181	1,910							181	1,910	2,091	162 60
Agricultural implements	105	111							105	111	216	22 93
Barley		40								40	40	0 94
Bricks	139	84							139	84	223	5 78
Bones												
Brimstone												
Buckwheat	2								2		2	0 05
Cement and water lime	515	366							515	366	881	23 27
Clay, lime and sand	3,638	5,236							3,638	5,236	8,874	207 56
Coal		1,163						7,082		8,245	8,245	289 13
Corn	4	107							4	107	111	2 69
Cattle	1								1		1	0 03
Cotton (raw)												
Crockery and earthenware	12	20							12	20	32	2 88
Dyé wood and dye stuffs	2								2		2	0 18
Fish	91								91		91	2 16
Flax and hemp	2								2		2	0 05
Flour	181	357							181	357	538	13 61
Furniture	54	54							54	54	108	9 83
Gypsum												
Glass (all kinds)	58	8							58	8	66	5 88
Hay (pressed)	1,425	75							1,425	75	1,500	35 34
Hogs												
Horses	7	9							7	9	16	0 46
Hides and skins, horns and hoofs	4								4		4	0 11
Ice												
Iron, railway	1	1							1	1	2	0 06
" pig	173								173		173	4 31
" all other	502	41							502	41	543	14 63
Iron ore												

No. (A) 9.—General Statement showing the Quantity of each Article transported on the Rideau Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Kryolite, chemical ore and other ore, except iron		1								1	1	09
Lard and lard oil	27	1							27	1	28	86
Meal, all kinds	43	107							43	107	150	3 78
Meats, other than pork	8	9							8	9	17	50
Marble												
Manilla	1								1		1	09
Molasses	56	8							56	8	64	5 62
Nails	117	8							117	8	125	12 89
Oats	227	707							227	707	934	37 25
Oil (in barrels)	178	118							178	118	296	26 35
Oil cake		6								6	6	24
Pease												
Potatoes	16	17							16	17	33	1 02
Pork	100	3							100	3	103	2 55
Paint	41	1							41	1	42	4 17
Pitch and tar	9								9		9	81
Rags	5	16							5	16	21	1 87
Rye												
Flax seed												
Resin												
Salt	1,993	296							1,993	296	2,289	63 72
Stone intended for cutting		3								3	3	07
" wrought	7								7		7	62
" not suitable for cutting, unwrought												
Seeds, all kinds	23								23		23	66
Sheep	2								2		2	05
Soda ash	19								19		19	1 65
Steel	72	13							72	13	85	2 04
Sugar	165	145							165	145	310	29 85
Spirits, beer, &c	171	51							171	51	222	19 79
Tobacco (raw)		11								11	11	33
Tallow		7								7	7	17
Tin	3	1							3	1	4	36
Turpentine	2								2		2	18
Wheat	5	863							5	863	868	20 31
White lead	72								72		72	6 96

Whiting	10							10		10	97	
Wool	1	1						1	1	2	06	
All other goods and merchandise not enumerated	1,431	547						1,431	547	1,978	182	91
Bark	6							6		6		52
Barrels, empty	1	84						1	84	85	6	37
Boat knees												
Floats	200							200		200	3	50
Firewood, in vessels	8,274	534	150					8,424	534	8,958	172	10
" rafts		81							81	81	1	71
Hoops												
Hop poles												
Lumber, sawn, in vessels	2,501	7,455	1,560	6,317				4,061	13,772	17,833	1,301	25
" rafts												
Masts, spars, and telegraph poles, in vessels		220							220	220	8	55
" " rafts		300							300	300	15	00
Railway ties, in vessels	294		203					497		497	52	09
" rafts												
Saw-logs		307							307	307	7	00
Staves and headings, barrels												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles	195	76						195	76	271	71	19
Split posts and fence rails, in vessels												
" " rafts												
Timber, square, in vessels												
" rafts	400							400		400	7	48
Traverses	20							20		20		13
Woodenware and wood partly manufactured	5							5		5		44
Total freight paying tolls	23,830	21,640	1,913	6,317			7,082	25,743	35,039	60,782	2,883	09
Coal, free, per Order in Council	338							338		338		
Grand total, freight	24,168	21,640	1,913	6,317			7,082	26,081	35,039	61,120		

Total tolls on vessels		1,743 07
" passengers		373 61
Total tolls		4,999 77
Total tolls on free coal	$9 02	
Winterage		91 00
Other receipts		66 00
Total revenue, exclusive of hydraulic rents		5,156 77

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. 10.—General Statement showing the Quantity of each Article transported on the St. Peter's Canal and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian. Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples	134								134		134	1 34
Agricultural products not enumerated, vegetables	131								131		131	1 31
" " " animal	6								6		6	0 06
Agricultural implements	21								21		21	0 21
Barley	16								16		16	0 16
Bricks	1,284								1,284		1,284	12 84
Bones												
Brimstone												
Buckwheat	2								2		2	0 02
Cement and water lime	470	1,326							470	1,326	1,796	17 96
Clay, lime and sand		84								84	84	0 84
Coal	397	37,363							397	37,363	37,760	377 60
Corn	21	252							21	252	273	2 73
Cattle	13								13		13	0 13
Cotton (raw)												
Crockery and earthenware	21	5							21	5	26	0 26
Dye wood and dye stuffs												
Fish	421	3,240		375					421	3,615	4,036	40 36
Flax and hemp												
Flour	2,234								2,234		2,234	22 34
Furniture	19	12							19	12	31	0 31
Gypsum		375								375	375	3 75
Glass (all kinds)	17								17		17	0 17
Hay (pressed)	1,026								1,026		1,026	10 26
Hogs												
Horses												
Hides and skins, horns and hoofs												
Ice												
Iron, railway	212								212		212	2 12
" pig		10								10	10	0 10
" all other	221	47							221	47	268	2 68

| | | |

No. (A) 10.—General Statement showing the Quantity of each Article transported on the St. Peter's Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Masts, spars and telegraph poles, in vessels	28	210							28	210	238	2 38
" " rafts												
Railway ties, in vessels	160								160		160	1 60
" rafts												
Saw-logs		270								270	270	2 70
Staves and headings, barrel	15								15		15	0 15
" pipe												
" West India												
Staves, salt barrel												
Shingles	465								465		465	4 65
Split posts and fence rails, in vessels	879	1,215							879	1,215	2,094	20 94
" " rafts												
Timber, square, in vessels	434	47							434	47	481	4 81
" rafts												
Traverses												
Woodenware and wood partly manufactured												
Total freight paying tolls	39,427	51,062		375					39,427	51,437	90,864	908 64
Total tolls on vessels												2,384 70
Other receipts												8 00
Total receipts												3,301 34

RICHARD DEVLIN,
Compiler of Canal Statistics.

Department of Railways and Canals,
Ottawa, May 16, 1904.

APPENDIX A—*Continued.*

No. (A) 11.—General Statement showing the Quantity of each Article transported on the Trent Valley Canals, and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples												
Agricultural products not enumerated, vegetables												
" " " animal												
Agricultural implements		6								6	6	0 18
Barley												
Bricks	60								60		60	0 60
Bones												
Brimstone												
Buckwheat												
Cement and water lime												
Clay, lime and sand												
Coal												
Corn												
Cattle												
Cotton (raw)												
Crockery and earthenware												
Dye wood and dye stuffs												
Fish												
Flax and hemp												
Flour												
Furniture	2	1							2	1	3	0 05
Gypsum												
Glass (all kinds)												
Hay (pressed)												
Hogs	219								219		219	2 19
Horses												
Hides and skins, horns and hoofs												
Ice												
Iron, railway												

No. (A) 11.—General Statement showing the Quantity of each Article transported on the Trent Valley Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Iron pig												
" all other		5								5	5	0 05
" ore												
Kroylite chemical ore and other ore, except iron												
Lard and lard oil												
Meal, all kinds		7								7	7	0 07
Meats, other than pork												
Marble												
Manilla												
Molasses												
Nails												
Oats												
Oil (in barrels)												
Oil cake												
Pease	291								291		291	2 91
Potatoes												
Pork												
Paint												
Pitch and tar												
Rags												
Rye												
Flax seed												
Resin												
Salt												
Stone intended for cutting												
" wrought												
" not suitable for cutting, unwrought												
Seeds, all kinds												
Sheep												
Soda ash												
Steel												
Sugar												
Spirits, beer, &c												
Tobacco (raw)												
Tallow												
Tin												

Turpentine												
Wheat	1,226								1,226		1,226	12 26
White lead												
Whiting												
Wool												
All other goods and merchandise not enumerated	10	103							10	103	113	3 29
Bark	68	38							68	38	106	4 15
Barrels, empty												
Boat knees												
Floats	2,301	9,728							2,301	9,728	12,029	98 39
Fire wood, in vessels	10,481	4,605							10,481	4,605	15,086	253 92
" rafts												
Hoops												
Hop poles												
Lumber, sawn, in vessels	2,804	278							2,804	278	3,082	51 51
" rafts	492	885							492	885	1,377	30 00
Masts, spars and telegraph poles, in vessels												
" " rafts												
Railway ties, in vessels	880								880		880	17 40
" rafts												
Saw logs	6,894	598							6,894	598	7,492	62 99
Staves and headings, barrel												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles	9	9							9	9	18	2 55
Split posts and fence rails, in vessels												
" " rafts												
Timber, square, in vessels	357								357		357	2 12
" rafts		50								50	50	0 50
Traverses												
Woodenware and wood partly manufactured												
Total, freight paying tolls	26,094	16,313							26,094	16,313	42,407	545 13

Total tolls on vessels	710 55
" passengers	252 39
Total tolls	1,508 07
Other receipts	25 00
Total revenue exclusive of hydraulic rents	1,533 07

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 12.—General Statement showing the Quantity of each Article transported on the Murray Canal and the Amount of Revenue heretofore collected, now free, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl	3								3		3	0 08
Apples	832	517							832	517	1,349	25 41
Agricultural products not enumerated, vegetables	316	381							316	381	697	13 31
" " animal	57	125							57	125	182	3 53
Agricultural implements	3	11							3	11	14	0 36
Barley		1,004								1,004	1,004	18 85
Bricks	207		17						224		224	4 23
Bones												
Brimstone												
Buckwheat		91	1						1	91	92	1 74
Cement and water lime	114	6	17						131	6	137	2 59
Clay, lime and sand	20								20		20	0 39
Coal	30	409						618	30	1,027	1,057	19 85
Corn	4	8							4	8	12	0 24
Cattle												
Cotton (raw)												
Crockery and earthenware	107	207							107	207	314	7 91
Dye wood and dye stuffs	28	4							28	4	32	0 83
Fish												
Flax and hemp		20								20	20	0 38
Flour	28	45							28	45	73	1 40
Furniture	105	163							105	163	268	6 93
Gypsum												
Glass (all kinds)	506	171	58						564	171	735	18 44
Hay (pressed)												
Hogs												
Horses	1	3	4						5	3	8	0 16
Hides and skins, horns and hoofs	36								36		36	0 69
Ice												
Iron, railway	648	288							648	288	936	17 63

" pig	29								29		29	0 55
" all other	896	270	46						942	270	1,212	22 93
Iron ore												
Kyrolite chemical ore and other ore, except iron												
Lard and lard oil	114	134							114	134	248	4 73
Meal, all kinds	13	116							13	116	129	2 50
Meats, other than pork	21	12							21	12	33	0 65
Marble	4								4		4	0 10
Manilla												
Molasses		5								5	5	0 13
Nails	153	72							153	72	225	5 67
Oats		206								206	206	3 88
Oil (in barrels)	527	768						2	527	770	1,297	32 53
Oil cake		1								1	1	0 02
Pease	102	96							102	96	198	3 72
Potatoes	3	5							3	5	8	0 16
Pork		20								20	20	0 38
Paint	558	242							558	242	800	20 08
Pitch and tar	6								6		6	0 15
Rags	61	9							61	9	70	1 77
Rye		350								350	350	6 57
Flax seed												
Resin												
Salt	165	447							165	447	612	11 53
Stone intended for cutting	9								9		9	17 00
" wrought	3	16							3	16	19	0 48
" not suitable for cutting, unwrought	841								841		841	8 41
Seeds, all kinds	82	254							82	254	336	6 43
Sheep												
Soda ash	98								98		98	2 46
Steel	273	48							273	48	321	6 10
Sugar	694	128							694	128	822	20 62
Spirits, beer, &c.	161	395							161	395	556	14 00
Tobacco (raw)												
Tallow	19	11							19	11	30	0 58
Tin	36	31							36	31	67	1 69
Turpentine		6								6	6	0 15
Wheat		782								782	782	14 70
White lead	2								2		2	0 05
Whiting	85								85		85	2 14
Wool	33	3							33	3	36	0 71
All other goods and merchandise not enumerated	2,880	3,094	302						3,182	3,094	6,276	157 65
Bark												
Barrels, empty	22	10							22	10	32	0 78
Boat knees												
Floats												
Firewood, in vessels			3,288						3,288		3,288	27 40
" rafts												
Hoops												
Hop poles												

No. (A) 12.—General Statement showing the Quantity of each Article transported on the Murray Canal, &c.—*Continued.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Lumber, sawn, in vessels	1,183	601	1,257						2,440	601	3,041	34 20
" rafts												
Masts, spars, and telegraph poles, in vessels			24						24		24	0 16
" " rafts												
Railway ties, in vessels			1,001								1,001	10 01
" rafts												
Saw-logs												
Staves and headings, barrel												
" " pipe												
" " West Indies												
Staves, salt barrel												
Shingles			51						51		51	4 17
Split posts and fence rails, in vessels												
" " rafts												
Timber, square, in vessels												
" " rafts												
Traverses												
Woodenware and wood partly manufactured												
Grand total freight	12,118	11,585	6,066					620	18,184	12,205	30,389	575 46

Total tolls on vessels	261 21
" passengers	298 31
*Damages	
Total revenue exclusive of hydraulic rents	1,134 98

*Amount of damages not included in above $20.

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 13.—General Statement showing the Quantity of each Article transported in the Sault Ste. Marie Canal, during the Season of Navigation in 1903.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Ashes, pot and pearl											
Apples	626		1,700		650				2,976		2,976
Agricultural products not enumerated, vegetables											
" " " animal											
Agricultural implements											
Barley		4,928				22,712		552		28,192	28,192
Bricks	328			178			178		506	178	684
Bones											
Brimstone											
Buckwheat		1,248								1,248	1,248
Cement and water lime	5,606		458		8,814				14,878		14,878
Clay, lime and sand	35	6,400		9,000					35	15,400	15,435
Coal	5,611	1,196			644,704	3,050	341,065	3,154	991,380	7,400	998,780
Corn						1,260				1,260	1,260
Cattle	23		3						26		26
Cotton (raw)											
Crockery and earthenware	336				6		7		349		349
Dye wood and dye stuffs											
Fish		1,259		6				15		1,280	1,280
Flax and hemp						875		890		1,765	1,765
Flour	57	94,078		1,072		194,775		22,228	57	312,153	312,210
Furniture	182								182		182
Gypsum											
Glass (all kinds)	953						4		957		957
Hay (pressed)	1,871				20				1,891		1,891
Hogs	1								1		1
Horses	6	25	3						9	25	34
Hides and skins, horns and hoofs		73						62		135	135
Ice											

No. (A) 13.—General Statement showing the Quantity of each Article transported on the Sault Ste. Marie Canal, &c.—*Continued.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total.		Total Tons.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Iron, railway	40,692	105			1,708		5,647	110	48,047	215	48,262
" pig	585			1,000		13,883	153		738	14,883	15,621
" all other	7,477	563		3,438		3,326	1,125	300	8,602	7,627	16,229
Iron ore		31,034		180,075	750	2,410,739	500	60,402	1,250	2,682,250	2,683,500
Kryolite chemical ore and other ore, except iron		20				17,408				17,491	17,491
Lard and lard oil	2								2		2
Meal, all kinds	23	81				14,302			23	14,383	14,406
Meats, other than pork											
Marble											
Manilla	999								999		999
Molasses	220								220		220
Nails	4,164	17			950				5,114	17	5,131
Oats	32	19,552				15,280		425	32	35,257	35,289
Oil (in barrels)	515	4	77		68		46		706	4	710
Oil cake		80				550		946		1,576	1,576
Pease											
Potatoes	92	5				130			92	135	227
Pork	4								4		4
Paint	219								219		219
Pitch and tar	66								66		66
Rags											
Rye						2,725				2,725	2,725
Flax seed		3,931				57,724		6,105		67,760	67,760
Resin	1								1		1
Salt	7,224		1,793	43	11,576			43	20,636	43	20,679
Stone intended for cutting			30						30		30
" wrought	2								2		2
" not suitable for cutting, unwrought					1,072				1,072		1,072
Seeds, all kinds	37	54							37	54	91
Sheep											
Soda ash	38								38		38
Steel	327	17			160		1,000	52	1,487	69	1,556
Sugar	1,530				915				2,445		2,445

Spirits, beer, &c	1,089		30						1,119		1,191
Tobacco (raw)											
Tallow											
Tin	197								197		197
Turpentine	1								1		1
Wheat		669,849		104,385		110,813		81,971		967,018	967,018
White lead	141								141		141
Whiting											
Wool		179				1,882				2,061	2,061
All other goods and merchandise not enumerated	69,596	2,417	30,343	1,052	39,651	1,560	831	421	140,421	5,450	145,871
Bark		84								84	84
Barrels, empty		35								35	35
Boat knees											
Floats											
Firewood, in vessels		30		325						355	355
" rafts		44								44	44
Hoops											
Hop poles											
Lumber, sawn, in vessels	349	133		30,893	834	18,835			1,183	49,861	51,044
" rafts											
Masts, spars and telegraph poles, in vessels	10								10		10
" " " rafts		89					60		60	89	149
Railway ties, in vessels											
" rafts		4								4	4
Saw logs	379	6,375	21		1,970	938		304	2,370	7,617	9,987
Staves and headings, barrels											
" " pipe											
" " West India											
Staves, salt barrel											
Shingles	10	15				11,254		403	10	11,672	11,682
Split posts and fence rails, in vessels				1						1	1
" " " rafts											
Timber, square, in vessels		240		1,000				2,120		3,360	3,360
" " rafts		5								5	5
Traverses											
Woodenware and wood partly manufactured		66								66	66
Total freight paying tolls	151,656	844,238	34,458	332,468	713,848	2,904,081	350,659	180,460	1,250,621	4,261,247	5,511,868

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX

No. (A.) 14.—STATEMENT of Traffic on the undermentioned Canals, and the amount

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Class No. 1.		$ cts.		$ cts.		$ cts.
Canadian vessels, steam	362,477	5,662 84	874,081	6,124 74	77,893	259 70
United States vessels, steam	510,127	7,658 09	179,483	1,208 06	434	7 34
Canadian vessels, sail	102,819	2,198 82	1,252,007	12.081 72	32,550	452 24
United States vessels, sail	61,573	1,370 85	81,642	890 41	232,126	2.882 47
Total, Class No. 1	1,036,996	16,890 60	2,387,213	20,304 93	343,008	3,601 75
Class No. 2.	No.		No.		No.	
Passengers	1,479	145 04	109.506	5,362 62	2,182	32 80
Class No. 3.	Tons.		Tons.		Tons.	
Bricks	200	23 68	8,371	500 23	38	2 41
Brimstone			2,014	204 09		
Cement and water lime	1	0 15	9,029	1,146 80	1,702	114 25
Clay, lime and sand	2,363	168 03	53,837	2,364 40	23,438	1,843 13
Fish	36	5 40	145	14 38		
Gypsum			1,123	14 11		
Iron, railway	488	73 95	43,477	6,477 67	369	34 59
" pig	177	26 55	4,436	563 79	338	33 80
" all other	5,230	897 96	86,116	2,906 57	8	0 54
Steel	754	100 23	5,787	408 99		
Salt	2,554	479 00	5,407	560 76	655	55 49
Stone for cutting			172	7 33		
Apples			7,992	1,100 85	699	47 64
Barley	14,656	1,465 60	7,095	555 75		
Buckwheat			802	56 69		
Corn	210,758	21,075 80	125,701	4,007 38	17	1 70
Cotton, raw			25	3 58		
Flax and hemp	1,905	285 50	83	12 45		
Flour	25,998	4,540 63	17,762	1,358 58	955	33 45
Hay, pressed			7,434	347 00	34,856	2,879 46
Meals, all kinds	13,909	2,781 20	595	42 95		
Oil cake	1,994	398 80	9,441	473 60		
Oats	7,911	802 96	17,033	1,032 36	1,317	43 97
Pease	85	8 50	1,346	104 85	13	0 44
Potatoes			148	9 75	6	0 21
Rye	4,904	490 40	8,693	392 04		
Flax seed	3,643	364 30	6,759	170 05		
Seeds, all kinds	60	10 35	6,311	303 74	6	0 20
Tobacco, raw			44	5 27		
Wheat	259,031	25,971 01	204,363	6,918 91		
All other agricultural products, vegetable	1	0 20	2,359	343 36	4	0 40
Bones			394	52 72	3	0 20
Cattle			423	28 45	187	6 57
Hogs			29	1 44		
Hides and skins, horns and hoofs			73	4 81		
Horses	2	0 40	1,217	69 99	37	1 35
Lard and lard oil	9	1 35	505	69 17		
Meats (other than pork)	1	0 15	89	9 48		
Pork	159	31 45	883	65 59	5	0 19
Sheep			101	6 92	150	5 15
Tallow	106	16 80	2	0 30		
Wool	482	96 40	20	2 85		
All other agricultural products, animal	1	0 15	5,234	561 41		
Total, Class No. 3	557,418	60,116 90	602,890	33,281 41	64,803	5,105 14

A—*Continued.*

of Tolls hitherto collected, now free, during the season of Navigation in 1903.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	
204,503	212 16	136,819	887 94	122,697	960 07	43,778	875 60	121,075	636 40	1,440,458
862	3 61	.....	.....	1,355	22 86	684	13 68	.....	.....	2,869,985
9,516	41 73	117,086	1,639 13	37,508	604 48	74,526	1,493 21	27,553	74 15	175,481
699	3 71	12,559	300 17	8,019	155 66	105	2 21	.....	.....	276,822
215,580	261 21	266,464	2,827 24	169,579	1,743 07	119,073	2,384 70	148,628	710 55	4,762,746
No.		No.		No.		No.		No.		No.
24,345	298 31	16,424	219 35	15,501	373 61	.....		34,976	252 39	32,410
Tons.		Tons.		Tons.		Tons.		Tons.		Tons.
224	4 23	2	0 12	223	5 78	1,284	12 84	60	0 60	684
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
137	2 59	176	3 52	881	23 27	1,796	17 96	.....	.....	14,878
20	0 39	13,173	771 41	8,874	207 56	84	0 84	.....	.....	15,435
.....	.....	5	0 30	91	2 16	4,036	40 36	.....	.....	1,280
.....	.....	.....	.....	.....	.....	375	3 75	.....	.....	.....
936	17 63	.....	.....	2	0 06	212	2 12	.....	.....	48,262
29	0 55	.....	.....	173	4 31	10	0 10	.....	.....	15,621
1,212	22 93	67	4 37	543	14 63	268	2 68	5	0 05	16,229
321	6 10	6	0 51	85	2 04	6	0 06	.....	.....	1,556
612	11 53	.....	.....	2,289	63 72	648	6 48	.....	.....	20,679
9	0 17	.....	.....	3	0 07	145	1 45	.....	.....	30
1,349	25 41	249	14 69	81	2 18	134	1 34	.....	.....	2,976
1,004	18 85	.....	.....	40	0 94	16	0 16	.....	.....	28,192
92	1 74	7	0 69	2	0 05	2	0 02	.....	.....	1,248
12	0 24	.....	.....	111	2 69	273	2 73	.....	.....	1,260
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	0 38	.....	.....	2	0 05	.....	.....	.....	.....	1,765
73	1 40	78	6 20	538	13 61	2,234	22 34	.....	.....	312,210
.....	.....	3,422	322 98	1,500	35 34	1,026	10 26	.....	.....	1,891
129	2 50	.....	.....	150	3 78	793	7 93	7	0 07	14,406
1	0 02	.....	.....	6	0 24	.....	.....	.....	.....	1,576
206	3 88	935	84 27	934	37 25	2,996	29 96	.....	.....	35.289
198	3 72	1	0 06	.....	.....	.....	.....	291	2 91	.....
8	0 16	295	19 39	33	1 02	6,087	60 87	.....	.....	227
350	6 57	.....	.....	.....	.....	.....	.....	.....	.....	2,725
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67,769
336	6 43	1	0 10	23	0 66	.....	.....	.....	.....	91
.....	.....	.....	.....	11	0 33	18	0 18	.....	.....	.....
782	14 70	.....	.....	868	20 31	.....	.....	1,226	12 26	967,018
697	13 31	13	1 14	14	0 40	131	1 31	.....	.....	.....
.....	.....	5	0 30	.....	.....	.....	.....	.....	.....	.....
.....	.....	586	46 73	1	0 03	13	0 13	.....	.....	26
.....	.....	135	10 53	.....	.....	.....	.....	219	2 19	1
36	0 69	17	1 70	4	0 11	.....	.....	.....	.....	135
8	0 16	259	13 68	16	0 46	.....	.....	.....	.....	34
248	4 73	.....	.....	28	0 86	10	0 10	.....	.....	2
33	0 65	.....	.....	17	0 50	89	0 89	.....	.....	.....
20	0 38	7	0 65	103	2 55	132	1 32	.....	.....	4
.....	.....	430	37 38	2	0 05	4	0 04	.....	.....	.....
30	0 58	11	1 08	7	0 17	3	0 03	.....	.....	.....
36	0 71	.....	.....	2	0 06	.....	.....	.....	.....	2,061
182	3 53	3,119	271 92	2,091	162 60	6	0 06	.....	.....	.....
9,350	176 80	2 ,99 0	1,613 52	19,748	609 84	22,831	228 31	1,808	18 08	1,575,551

No. (A) 14.—STATEMENT of Traffic on the undermentioned Canals, and the amount

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Class No. 4.		$ cts.		$ cts.		$ cts.
Ashes, pot and pearl	14	2 80	177	44 99		
Agricultural implements	46	9 20	183	19 30	89	3 75
Crockery and earthenware	159	23 85	430	78 66	51	5 10
Dye woods and dye stuffs			68	7 74	33	3 30
Furniture	13	2 60	1,966	319 06	4	0 40
Glass (all kinds)	55	9 00	2,839	554 48		
Marble	1,460	219 00	7	0 70		
Manilla			77	14 77		
Molasses	322	61 10	660	72 06	175	14 16
Nails	1,054	159 05	5,048	913 49	54	1 88
Oil (in barrels)	17,508	3,483 05	2,480	416 80	108	4 19
Paint	52	8 05	1,519	272 70		
Pitch and tar			474	57 52	2,018	201 80
Rags	4	0 80	637	74 40		
Resin	20	4 00	1,931	106 34	2,482	296 62
Soda ash	32	4 80	1,368	271 33		
Sugar	1,435	215 25	2,814	477 54	137	8 38
Stone (wrought)			83	5 72		
Tin			861	161 40		
Turpentine			73	7 54	42	4 20
White lead			355	66 20		
Whiting			835	166 55		
Whisky and all other spirits	407	61 30	2,474	362 22		
Merchandise (not enumerated)	34,643	5,262 01	33,360	4,893 61	5,967	467 05
Total, Class No. 4	57,224	9,525 86	60,719	9,365 12	11,160	1,010 83
Class No. 5.						
Bark						
Barrels, empty			1,339	161 61	32	1 31
Boat knees						
Floats						
Firewood, in vessels	3,705	178 99	120,457	7,561 04	155,902	5,188 29
" in rafts						
Lumber, sawn, in vessels	85,592	15,253 15	42,687	1,240 09	30,041	1,764 83
" in rafts	3	0 45	1,156	35 22		
Hoops						
Railway ties, in vessels	688	85 00			1,238	98 81
" in rafts			611	48 88		
Masts, spars and telegraph poles, in vessels	7	0 50				
Masts, spars and telegraph poles, in rafts			20,518	512 95	63	2 10
Square timber, in vessels	26,324	3,948 60	860	35 50	744	27 49
" in rafts			5,357	135 26	256	8 55
Woodenware and wood partly manufactured			45	16 20		
Shingles	54	38 46	74	15 28	91	20 77
Split posts and fence rails, in vessels			10	1 00		
" " in rafts						
Saw-logs	1,711	82 62				
Staves and headings, barrel			81	14 42		
" " pipe						
" " West India						
" " salt barrel						
Traverses						
Hop poles			2	0 10		
Total, Class No. 5	118,084	19,587 77	193,197	9,777 55	188,367	7,112 15

SESSIONAL PAPER No. 20

A—*Continued.*

of Tolls hitherto collected, now free, during the Season of Navigation in 1903.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canals		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	
3	0 08									
14	0 36	14	2 07	216	22 93	21	0 21	6	0 18	
314	7 91	39	7 18	32	2 88	26	0 26			349
32	0 83	2	0 38	2	0 18					
268	6 93	100	12 10	108	9 83	31	0 31	3	0 05	182
735	18 44	81	14 46	66	5 88	17	0 17			957
4	0 10					50	0 50			
				1	0 09	31	0 31			999
5	0 13	1	0 14	64	5 62	330	3 30			220
225	5 67	2	0 28	125	12 89	143	1 43			5,131
1,297	32 53	6	1 04	296	26 35	550	5 50			710
800	20 08	2	0 38	42	4 17	11	0 11			219
6	0 15	152	28 88	9	0 81	118	1 18			66
70	1 77	101	18 02	21	1 87					
										1
98	2 46			19	1 65					38
822	20 62	2	0 28	310	29 85	225	2 25			2,445
19	0 48			7	0 62					2
67	1 69	4	0 48	4	0 36	122	1 22			197
6	0 15			2	0 18	2	0 02			1
2	0 05	2	0 38	72	6 96					141
85	2 14			10	0 97					
556	14 00	6	1 09	222	19 79	216	2 16			1,119
6,276	157 05	1,724	261 26	1,978	182 91	1,186	11 86	113	3 29	145,871
11,704	293 62	2,238	348 42	3,601	336 79	3,079	30 79	122	3 52	158,648
				6	0 52	13	0 13	106	4 15	84
32	0 78	64	8 04	85	6 37	106	1 06			35
		32,568	359 34	200	3 50			12,029	98 39	
3,288	27 40	12,698	418 03	8,958	172 10	316	3 16	15,086	253 92	355
				81	1 71					44
3,041	34 20	332,563	23,501 60	17,833	1,301 25	17,639	176 39	3,082	51 51	51,044
		400	42 00					1,377	30 00	
		1	0 09							
1,001	10 01	139	12 41	497	52 09	160	1 60	880	17 40	
										4
24	0 16			220	8 55	238	2 38			10
				360	15 00					149
		2,160	30 71			481	4 81	357	2 12	3,360
		1,454	16 29	400	7 48			50	0 50	5
				5	0 44					66
51	4 17	14	2 68	271	71 19	465	4 65	18	2 55	11,682
						2,094	20 94			1
		773	17 00	307	7 00	270	2 70	7,492	62 99	9,987
						15	0 15			
				20	0 13					
7,437	76 72	382,834	24,408 19	29,183	1,647 33	21,797	217 97	40,477	523 53	76,826

APPENDIX

No. (A) 14—STATEMENT of Traffic on the undermentioned Canals, and

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Special Class.		$ cts.		$ cts.		$ cts.
Coal	147,884	29,576 80	316,423	44,973 49	79,894	7,779 94
Kryolite or chemical ore	.....	.....	464	23 20	348	16 68
Iron ore	18,323	916 15	.....	.....	1,999	99 95
Stone, unwrought, not suitable for cutting	1,356	50 64	9,867	201 15	.....	.....
Ice	1,080	33 13	.....	.....	.....	.....
Total, Special Class	168,643	30,576 72	326,754	45,197 84	82,241	7,896 57
Total freight and tolls	901,369	119,807 25	1,183,560	97,621 92	346,571	21,124 69
Timber and other wood, free	40,637	2,766 16	.....	.....	.....	.....
Wheat, corn, flour, iron, salt, coal, &c., free	60,913	9,079 40	497,646	48,618 93	.....	.....
Grand totals, passengers and tonnage of vessels not included	1,002,919	131,652 81	1,681,206	146,240.85	346,571	21,124 69

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

A—*Continued.*

the Amount of Tolls heretofore collected, now free, &c.—*Continued.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	
1,057	19 85	552	22 29	8,245	289 13	37,760	377 60	.....	.....	998,780
.....	.....	.....	.....	.....	.....	11	0 11	.....	.....	17,491
.....	.....	.....	.....	.....	.....	5	0 05	.....	.....	2,683,500
841	8 41	.....	.....	.....	.....	5,381	53 81	.....	.....	1,072
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,898	28 26	552	22 29	8,245	289 13	43,157	431 57	.....	.....	3,700 843
30,389	575 46	408,623	26,392 62	60,782	2,883 09	.....	.....	42,407	1,508 07	5,511,868
.....	.....	27,850	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	338	9 02	.....	.....	.....	.....	.....
30,389	575 46	436,473	26,392 62	61,120	2,892 11	90,864	3,293 34	42,407	1,508 07	5,511,868

RICHARD DEVLIN,
Compiler of Canal Statistics.

SUPPLEMENTARY APPENDIX

No. (A) 15.—Summary Statement of Traffic on the undermentioned Canals during of each description of property passed through and

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		$ cts.		$ cts.		$ cts.
Vessels of all kinds	1,036,996	16,890 60	2,387,213	20,304 93	343,008	3,601 75
	No.		No.		No.	
Passengers	1,479	145 04	109,506	5,262 62	2,182	32 80
Forest—Produce of Wood.	Tons.		Tons.		Tons.	
Bark						
Boat knees						
Floats						
" Free						
Firewood	3,705	178 99	120,457	7,561 04	155,902	5,188 29
" Free	40,026					
Hoops and hop poles			2	0 10		
Lumber, sawed	85,595	15,253 60	43,843	1,275 31	30,041	1,764 83
" Free						
Masts, spars, &c.	7	0 50	20,518	512 95	63	2 10
Railway ties	688	85 00	611	48 88	1,238	98 81
" Free	611					
Saw-logs	1,711	82 62				
Staves, all kinds			81	14 42		
Shingles	54	38 46	74	15 28	91	20 77
Split posts and rails			10	1 00		
Timber, square	26,324	3,948 60	6,217	170 76	1,000	36 04
" Free						
Traverses						
Total	158,721	19,587 77	191,813	9,599 74	188,335	7,110 84
Farm Stock.						
Cattle			423	28 45	187	6 57
Hogs			29	1 44		
Horses	2	0 40	1,217	69 99	37	1 35
Sheep			101	6 92	150	5 15
Total	2	0 40	1,770	106 80	374	13 67
Produce of Animals.						
Bones			394	52 72	3	0 20
Horns and hoofs, hides and skins, raw			73	4 81		
" " " Free	6					
Lard and lard oil	9	1 35	505	69 17		
Meats, other than pork	1	0 15	89	9 48		
" " " Free	1					
Pork	159	31 45	883	65 59	5	0 19
Tallow	106	16 80	2	0 30		
" Free			3			
Wool	482	96 40	20	2 85		
Agricultural products not enumerated, animal	1	0 15	5,234	561 41		
Total	765	146 30	7,203	766 33	8	0 39

A.—*Continued.*

the Season of Navigation ended December 31, 1903, showing the Total Quantity the amount of Tolls heretofore collected, now free.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	Free.
215,580	261 21	266,474	2,827 24	169,579	1,743 07	119,093	2,384 70	148,628	710 55	4,762,746
No. 24,345	298 31	No. 16,424	219 35	No. 15,501	373 61	No.	.....	No. 34,976	252 39	32,410
Tons.	.....	Tons.	... .	Tons. 6	0 52	Tons. 13	0 13	Tons. 106	4 15	84
.....	.....	32,568	359 34	200	3 50	.....	.....	12,029	98 39	.....
.....	.....	15,330	.....	.....	.....	.....	.....	.....	.....	.....
3,288	27 40	12,698	418 03	9,039	173 81	316	3 16	15,086	253 92	399
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	0 09	.....	.....	.....	.....	.....	.....	.....
3,041	34 20	332,963	23,543 60	17,833	1,301 25	17,639	176 39	4,459	81 51	51,044
.....	.....	120	.....	.....	.....	.....	.....	.....	.....	.....
24	16	.....	.....	520	23 55	238	2 38	.....	.....	159
1,001	10 01	139	12 41	497	52 09	160	1 60	880	17 40	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	773	17 00	307	7 00	270	2 70	7,492	62 99	9,987
.....	.....	.....	.....	.....	.....	15	0 15	.....	.....	.....
51	4 17	14	2 68	271	71 19	465	4 65	18	2 55	11,682
.....	.....	.....	.....	.....	.....	2,094	20 94	.....	.....	.....
.....	.....	3,614	47 00	400	7 48	481	4 81	407	2 62	3,365
.....	.....	12,400	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	20	0 13	.....	.....	.....	.....	.....
7,405	75 94	410,620	24,400 15	29,093	1,640 52	21,691	216 91	40,477	523 53	76,725
.....	.....	586	46 73	1	0 03	13	0 13	.....	.....	26
.....	.....	135	10 53	.....	.....	.....	.....	219	2 19	1
8	0 16	259	13 68	16	0 46	.....	.....	.....	.....	34
.....	.....	430	37 38	2	0 05	4	0 04	.....	.....	.....
8	0 16	1,410	108 32	19	0 54	17	0 17	219	2 19	61
.....	.....	5	0 30	.....	.....	.....	.....	.....	.....	.....
36	0 39	17	1 70	4	0 11	.....	.....	.....	.....	135
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
248	4 73	.....	.....	28	0 86	10	0 10	.....	.....	2
33	0 65	.....	.....	17	0 50	89	0 89	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	0 38	7	0 65	103	2 55	132	1 32	.....	.....	4
30	0 58	11	1 08	7	0 17	3	0 03	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	0 71	.....	.....	2	0 06	.....	.....	.....	.....	2,061
182	3 53	3,119	271 92	2,091	162 60	6	0 06	.....	.....	.....
585	11 27	3,159	275 65	2,252	166 85	240	2 40	.....	.....	2,202

No. (A) 15.—Summary Statement of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Agricultural Products.		$ cts.		$ cts.		$ cts.
Agricultural products not enumerated, vegetables	1	0 20	2,359	343 36	4	0 40
Apples			7,992	1,100 85	699	47 64
Barley	14,656	1,465 60	7,095	555 75		
" Free			2,206			
Buckwheat			802	56 69		
Cotton, raw			25	3 58		
" Free	23					
Corn	210,758	21,075 80	125,701	4,007 38	17	1 70
" Free			123,864			
Flax and Hemp	1,905	285 50	83	12 45		
Flour	25,998	4,540 63	17,762	1,358 58	955	33 45
" Free			16,151			
Hay, pressed			7,434	347 00	34,856	2,879 46
Meals, all kinds	13,909	2,781 20	595	42 95		
" Free	17		348			
Manilla			77	14 77		
Oats	7,911	802 96	17,033	1,032 36	1,317	43 97
" Free			2,438			
Pease	85	8 50	1,346	104 85	13	0 44
" Free			63			
Potatoes			148	9 75	6	0 21
Rye	4,904	490 40	8,693	392 04		
" Free			4,260			
Seeds,—Flax, Clover and Grass	3,703	374 65	13,070	473 79	6	0 20
" " Free	325		3,643			
Tobacco, raw			44	5 27		
" Free	2					
Wheat	259,031	25,971 01	204,363	6,918 91		
" Free			226,746			
Total	543,228	57,796 45	794,341	16,780 33	37,873	3,007 47
Manufactures.						
Ashes, pot and pearl	14	2 80	177	44 99		
" " Free	2		2			
Agricultural implements	46	9 20	183	19 30	89	3 75
" " Free			58			
Barrels, empty			1,339	161 61	32	1 31
Bricks	200	23 68	8,371	500 23	38	2 41
" Free	80					
Cement and water lime	1	0 15	9,029	1,146 80	1,702	114 25
" " Free	3,924					
Crockery and earthenware	159	23 85	430	78 66	51	5 10
" " Free	32					
Furniture	13	2 60	1,966	319 06	4	0 40
" Free	1		3			
Glass, all kinds	55	0 09	2,839	554 48		
" Free	1,207		15			
Iron, railway	408	73 95	43,477	6,477 67	369	34 59
" " Free	39,641					
" pig	177	26 55	4,436	563 79	338	33 80
" " Free	273					
" all other	5,230	897 96	36,116	2,906 57	8	0 54
" " Free	5,845		2,542			
Molasses	322	61 10	660	72 06	175	14 16
" Free	6		240			
Nails	1,054	159 05	5,048	913 49	54	1 88
" Free	2,878		19			
Oil	17,508	3,483 05	2,480	416 80	108	4 19
" Free	16		14,619			
Oil cake	1,994	398 80	9,441	473 60		
" Free			462			

Canals and the amount of Tolls collected, &c.—*Continued.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	Free.
697	13 31	13	1 14	14	0 40	131	1 31	.....	.....	.....
1,349	25 41	249	14 69	81	2 18	134	1 34	.....	.....	2,976
1,004	18 85	.....	.....	40	0 94	16	0 16	.....	.....	28,192
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
92	1 74	7	0 69	2	0 05	2	0 02	.....	.....	1,248
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	0 24	.....	.....	111	2 69	273	2 73	.....	.....	1,260
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	0 38	.....	.....	2	0 65	.....	.....	.....	.....	1,765
73	1 40	78	6 20	538	13 61	2,234	22 34	.....	.....	312,210
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	3,422	322 98	1,500	35 34	1,026	10 26	.....	.....	1,891
129	2 50	.....	.....	150	3 78	793	7 93	7	0 07	14,406
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	1	0 09	31	0 31	.....	.....	999
206	3 88	935	84 27	934	37 25	2,996	29 96	.....	.....	35,289
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
198	3 72	1	0 06	.....	.....	.....	.....	291	2 91	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	0 16	295	19 39	33	1 02	6,087	60 87	.....	.....	227
350	6 57	.....	.....	.....	.....	.....	.....	.....	.....	2,725
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
336	6 43	1	0 10	23	0 66	.....	.....	.....	.....	67,851
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	11	0 33	18	0 18	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
782	14 70	.....	.....	868	20 31	.....	.....	1,226	12 26	967,018
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5,256	99 29	5,001	449 52	4,308	118 70	13,741	137 41	1,524	15 24	1,438,057
3	0 08	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	0 36	14	2 07	216	22 93	21	0 21	6	0 18	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	0 78	64	8 04	85	6 37	106	1 06	.....	.....	35
224	4 23	2	0 12	223	5 78	1,284	12 84	60	0 60	684
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
137	2 59	176	3 52	881	23 27	1,796	17 96	.....	.....	14,878
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
314	7 91	39	7 18	32	2 88	26	0 26	.....	.....	349
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
268	6 93	100	12 10	108	9 83	31	0 31	3	0 05	182
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
735	18 44	81	14 46	66	5 88	17	0 17	.....	.....	957
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
936	17 63	.....	.....	2	0 06	212	2 12	.....	.....	48,262
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	0 55	.....	.....	173	4 31	10	0 10	.....	.....	15,621
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,212	22 93	67	4 37	543	14 63	268	2 68	5	0 05	16,229
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	0 13	1	0 14	64	5 62	330	3 30	.....	.....	220
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
225	5 67	2	0 28	125	12 89	143	1 43	.....	.....	5,131
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,297	32 53	6	1 04	296	26 35	550	5 50	.....	.....	710
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	0 02	.....	.....	6	0 24	.....	.....	.....	.....	1,576
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. (A) 15.—Summary Statement of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Manufactures—Concluded.		$ cts.		$ cts.		$ cts.
Paint	52	8 05	1,519	272 70		
" Free.	158		5			
Pitch and tar			474	57 52	2,018	201 80
" Free.	58					
Resin	20	4 00	1,931	106 34	2,482	296 62
" Free.	1		20			
Soda ash	32	4 80	1,368	271 33		
" Free.	264					
Spirits, whisky, &c	407	61 30	2,474	362 22		
" " Free.	452		2			
Steel	754	100 23	5,787	408 99		
" Free.	332					
Sugar	1,435	215 25	2,814	477 54	137	8 38
" Free.	204					
Tin			861	161 40		
" Free.	209					
White lead			355	66 20		
" Free.	80					
Turpentine			73	7 54	42	4 20
" Free.	1					
Whiting			835	166 55		
" Free.	22					
Woodenware			45	16 20		
Total	85,647	5,565 37	162,515	17,023 64	7,647	727 38
Merchandise.						
Brimstone (crude)			2,014	204 09		
" " Free.	23					
Clay, lime and sand	2,363	168 03	53,857	2,364 30	23,438	1,843 13
" " Free.	481					
Coal	147,884	29,576 80	316,423	44,973 49	79,894	7,779 94
" Free.	401		99,219			
Dye woods and dye stuffs			68	7 74	33	3 30
Fish	36	5 40	145	14 38		
" Free.	8					
Gypsum			1,123	14 11		
Ores (all kinds)	18,323	916 15	464	23 20	2,347	116 63
Marble	1,460	219 00	7	0 70		
Rags	4	0 80	637	74 40		
" Free.	29		4			
Salt	2,554	479 00	5,407	560 76	655	55 49
" Free.	87		132			
Stone (all kinds)	1,356	50 64	10,122	214 20		
" Free.	150					
All other goods and merchandise (not enumerated	35,723	5,295 14	33,360	4,893 61	5,967	467 05
" " Free.	3,674		582			
Total	214,556	36,710 96	523,564	53,345 08	112,334	10,265 54
Grand totals (passengers and tonnage of vessels not included)	1,002,919	136,842 89	1,681,206	123,189 47	346,571	24,759 24

Department of Railways and Canals,
Ottawa, May 16, 1904.

SESSIONAL PAPER No. 20

Canals and the amount of Tolls collected, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault St. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	Free.
800	20 08	2	0 38	42	4 17	11	0 11			219
6	0 15	152	28 88	9	0 81	118	1 18			66
										1
98	2 46			19	1 65					38
556	14 00	6	1 09	222	19 79	216	2 16			1,119
321	6 10	6	0 51	85	2 04	6	0 06			1,556
822	20 62	2	0 28	310	29 85	225	2 25			2,445
67	1 69	4	0 48	4	0 36	122	1 22			197
2	0 05	2	0 38	72	6 96					141
6	0 15			2	0 18	2	0 02			1
85	2 14			10	0 97					
				5	0 44					66
8,195	188 22	726	85 32	3,600	208 26	5,494	54 94	74	0 88	110,683
20	0 39	13,173	771 41	8,874	207 56	84	0 84			15,435
1,057	19 85	552	22 29	8,245	289 13	37,760	377 60			998,780
				338						
32	0 83	2	0 38	2	0 18					
		5	0 30	91	2 16	4,036	40 36			1,280
						375	3 75			
						16	0 16			2,700,991
4	0 10					50	0 50			
70	1 77	101	18 02	21	1 87					
612	11 53			2,289	63 72	648	6 48			20,679
869	9 06			10	0 69	5,526	55 26			1,104
6,276	157 05	1,724	261 26	1,978	182 91	1,186	11 86	113	3 29	145,871
8,940	200 58	15,557	1,073 66	21,848	748 22	49,681	496 81	113	3 29	3,884,140
30,389	1,134 98	436,473	29,439 21	61,120	4,999 77	90,864	3,293 34	42,407	1,508 07	5,511,868

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 16.—STATEMENT showing the amount of Tolls accrued each month during the Season of Navigation ended December 31, 1903.

Canals and Offices.	January	March.	April.	May.	June.	July.	August.	September	October.	November	December.	Total.
WELLAND CANAL.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Chippawa	.....	.....	.....	9 02	14 53	28 52	32 74	22 15	4 57	5 86	....	117 39
Colborne	.....	.....	4,898 36	13,106 25	15,888 60	12,833 17	11,824 70	10,721 48	15,901 53	10,386 41	1,013 89	96,574 39
Dalhousie	.....	.....	3,076 01	7,353 98	5,807 24	4,767 12	5,031 91	4,769 25	5,954 95	2,119 43	43 25	38,923 14
Dunnville	.....	.....	0 50	235 49	141 45	110 21	145 40	133 89	102 78	133 95	8 00	1,011 67
St. Catharines	.....	0 42	0 50	39 23	21 16	38 73	44 14	21 29	32 82	18 01	....	216 30
Total, Welland Canal	.....	0 42	7,975 37	20,743 97	21,872 98	17,777 75	17,078 89	15,668 06	21,996 65	12,663 66	1,065 14	136,842 89
ST. LAWRENCE CANAL.												
Beauharnois	.....	.....	.....	24 98	23 79	28 85	20 25	29 44	19 58	6 13	.....	153 02
Cardinal	.....	.....	.....	568 25	142 74	520 67	319 78	245 40	228 46	229 28	5 94	2,260 52
Cornwall	.....	.....	.....	6,844 95	8,606 05	6,747 53	7,717 24	6,416 52	5,150 28	2,383 83	184 41	44,050 81
Kingston	.....	.....	517 64	1,544 55	1,528 29	2,463 36	2,895 07	1,809 34	2,446 93	1,466 13	.....	14,671 31
Lachine	.....	.....	.....	383 65	555 13	846 00	788 82	591 92	527 47	240 81	.....	3,933 80
Montreal	.....	.....	.....	5,503 64	6,613 34	8,531 53	8,400 76	7,444 77	6,515 80	4,609 02	29 96	47,648 82
Soulanges	.....	.....	.....	1,369 12	1,619 51	1,523 65	1,446 82	1,131 77	2,034 24	1,346 08	.....	10,471 19
Total, St. Lawrence Canals	.....	.....	517 64	16,239 14	19,088 85	20,661 59	21,588 74	17,669 16	16,922 76	10,281 28	220 31	123,189 47
CHAMBLY CANAL.												
Chambly	.....	.....	.....	825 37	1,793 82	2,245 36	2,285 39	1,729 32	1,657 71	982 79	.....	11,519 76
St. John's	.....	.....	.....	2,114 88	2,012 17	3,293 20	2,059 59	1,183 31	1,357 67	461 22	.....	12,482 04
St. Ours	.....	.....	30 27	44 00	110 12	113 65	120 33	100 61	153 06	85 40	.....	757 44
Total, Chambly Canal	.....	.....	30 27	2,984 25	3,916 11	5,652 21	4,465 31	3,013 24	3,168 44	1,529 41	.....	24,759 24
OTTAWA CANALS.												
Ottawa	.....	.....	.....	4,342 51	4,345 22	3,520 51	3,059 69	2,347 14	1,939 75	1,322 76	.....	20,877 58
Carillon	.....	.....	.....	41 70	40 69	40 52	16 68	11 62	20 26	27 56	.....	199 03
Grenville	.....	.....	8 75	456 63	942 25	894 25	1,182 58	1,160 15	1,142 58	744 51	.....	6,531 70
St. Anne's	.....	.....	0 85	162 15	289 84	347 52	313 71	294 12	281 55	141 16	.....	1,830 90
Total, Ottawa Canals	.....	.....	9 60	5,002 99	5,618 00	4,802 80	4,572 66	3,813 03	3,384 14	2,235 99	.....	29,439 21

RIDEAU CANAL.												
Kingston Mills				131 16	137 80	170 15	259 40	217 08	157 16	150 01		1,222 76
Ottawa				252 35	448 92	537 42	303 06	441 97	487 80	363 21		2,834 73
Smith's Falls				103 93	147 09	259 12	184 03	115 80	84 74	47 57		942 28
Total, Rideau Canal				487 44	733 81	966 69	746 49	774 85	729 70	560 79		4,999 77
ST. PETER'S CANAL.												
St. Peter's	28 34		121 17	303 74	391 42	502 73	582 99	364 09	392 02	330 04	276 80	3,293 34
TRENT VALLEY CANALS.												
Bobcaygeon			12 81	57 48	91 55	75 25	79 39	51 50	47 36	34 30		449 64
Buckhorn			2 50	1 50	12 12	27 05	31 45	22 74	0 50	3 10		100 96
Burleigh			2 50	9 29	16 45	9 83	28 19	40 23	103 69	31 45		241 63
Fenelon Falls				13 40	26 25	45 89	41 30	41 75	9 50			178 09
Hastings				1 00	4 75	7 75	7 55	8 50	4 75			34 30
Peterborough			2 90	47 55	76 64	121 61	122 65	81 55	38 10	12 45		503 45
Total, Trent Valley Canals			20 71	130 22	227 76	287 38	310 53	246 27	203 90	81 30		1,508 07
MURRAY CANAL.												
Brighton			22 48	107 17	120 90	219 09	254 81	147 43	185 85	77 25		1,134 98
Grand total	28 34	0 42	8,697 24	45,998 92	51,969 83	50,870 24	49,600 42	41,696 13	46,983 46	27,759 72	1,562 25	325,166 97

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

APPENDIX A—*Continued.*

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals during the Season of Navigation ended December 31, 1903, and the amount of Tolls heretofore collected, now free.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States. Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
WELLAND CANAL.													$ cts.
Canadian vessels, steam	700	95,950	108,222	84,490	8,096	310	.....	7,258	58,151	188,008	174,469	362,477	5,662 84
" sail	255	24,844	25,602	25,604	908	607	.....	.....	25,254	51,055	51,764	102,819	2,198 82
Total, Canadian	955	120,794	133,824	110,094	9,004	917	.....	7,258	83,405	239,063	226,233	465,296	7,861 66
United States vessels, steam	620	175	70	52,882	2,901	200,797	164,535	1,836	86,931	255,690	254,437	510,127	7,658 09
" sail	212	6	173	12,190	1,438	18,849	12,310	601	16,006	31,646	29,927	61,573	1,370 85
Total, United States	832	181	243	65,072	4,339	219,646	176,845	2,437	102,937	287,336	284,364	571,700	9,028 94
Grand Total, Welland Canal	1,787	120,975	134,067	175,166	13,343	220,563	176,845	9,695	186,342	526,399	510,597	1,036,996	16,890 60
ST. LAWRENCE CANALS.													
Canadian vessels, steam	3,561	444,024	370,857	24,031	.....	.....	114	.....	35,055	468,055	406,026	874,081	6,124 74
" sail	4,885	636,511	507,671	37,622	368	.....	339	.....	69,496	674,133	577,874	1,252,007	12,081 72
Total, Canadian	8,446	1,080,535	878,528	61,653	368	.....	453	.....	104,551	1,142,188	983,900	2,126,088	18,206 46
United States vessels, steam	808	3,182	3,715	67,354	.....	18,502	18,170	203	68,357	89,241	90,242	179,483	1,208 06
" sail	444	1,801	9,356	25,653	.....	342	2,086	16,379	26,025	44,175	37,467	81,642	890 41
Total, United States	1,252	4,983	13,071	93,007	.....	18,844	20,256	16,582	94,382	133,416	127,709	261,125	2,098 47
Grand Total, St. Lawrence Canals	9,698	1,085,518	891,599	154,660	368	18,844	20,709	16,582	198,629	1,275,604	1,111,609	2,387,213	20,304 93

Chambly Canal.													
Canadian vessels, steam	337	38,945	38,925						28	38,945	38,953	77,898	259 70
" sail	599	6,687	7,713	6,396					11,754	13,083	19,467	32,550	452 24
Total, Canadian	936	45,632	47,638	6,396					11,782	52,028	58,420	110,448	711 94
United States vessels, steam	27	89		58					287	147	287	434	7 34
" sail	2,482	82	2,356	98,776					130,912	98,858	133,268	232,126	2,882 47
Total, United States	2,509	171	2,356	98,834					131,199	99,005	133,555	232,560	2,889 81
Grand Total, Chambly Canal	3,445	45,803	6,994	105,230					142,981	151,033	191,975	343,008	3,601 75
Ottawa Canals.													
Canadian vessels, steam	988	40,175	96,694							40,175	96,644	136,819	887 94
" sail	977	4,010	108,941		4,135					4,010	113,076	117,086	1,639 13
Total Canadian	1,965	44,185	205,585		4,135					44,185	209,720	253,905	2,527 07
United States vessels, steam													
" sail	129	1,813			10,746					1,813	10,746	12,559	300 17
Total United States	129	1,813			10,746					1,813	10,746	12,559	300 17
Grand Total, Ottawa Canals	2,094	45,998	205,585		14,881					45,998	220,466	266,464	2,827 24
Rideau Canal.													
Canadian vessels, steam	2,154	49,278	47,489	12,030					13,900	61,308	61,389	122,697	960 07
" sail	1,519	18,118	18,300	436	109				545	18,554	18,954	37,508	604 48
Total Canadian	3,673	67,396	65,789	12,466	109				14,445	79,862	80,343	160,205	1,564 55
United States vessels, steam	89	189	86	469					611	658	697	1,355	22 86
" sail	204	1,551	3,199	446	2,449				374	1,997	6,022	8,019	155 66
Total United States	293	1,740	3,285	915	2,449				985	2,655	6,719	9,374	178 52
Grand Total, Rideau Canal	3,966	69,136	69,074	13,381	2,558				15,430	82,517	87,062	169,579	1,743 07
St. Peter's Canal.													
Canadian vessels, steam	325	23,873	19,905							23,873	19,905	43,778	875 21
" sail	1,424	35,733	38,465					328		36,061	38,465	74,526	1,493 60
Total Canadian	1,749	59,606	58,370					328		59,934	58,370	118,304	2,368 81

No. (A) 17.—Summary Statement showing the Number, Tonnage and Nationality of Vessels, &c.—*Concluded.*

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
St. Peter's Canal—*Concluded*													$ cts.
United States vessels, steam	6	201	224		88			171		372	312	684	13 68
" sail	5	33	49					23		56	49	105	2 21
Total United States	11	234	273		88			194		428	361	789	15 89
Grand Total, St. Peter's Canal	1,760	59,840	58,643		88			194		60,362	58,731	119,093	2,384 79
Trent Valley Canals.													
Canadian vessels, steam	2,283	60,233	60,842							60,233	60,842	121,075	636 40
" sail	316	14,300	13,253							14,300	13,253	27,553	74 15
Total Canadian	2,599	74,533	74,095							74,533	74,095	148,628	710 55
United States vessels, steam													
" sail													
Total United States													
Grand Total, Trent Valley Canal	2,599	74,533	74,095							74,533	74,095	148,628	710 55
Murray Canal.													
Canadian vessels, steam	526	80,009	73,592	27,289	157				23,456	107,298	97,205	204,503	212 16
" sail	207	3,226	3,842	1,361					1,087	4,587	4,929	9,516	41 73
Total Canadian	733	83,235	77,434	28,650	157				24,543	111,885	102,134	214,019	253 89
United States vessels, steam	16	96	196	447			37		86	543	319	862	3 61
" sail	13	9	265	273					152	282	417	699	3 71
Total United States	29	105	461	720			37		239	825	736	1,561	7 32
Grand Total, Murray Canal	762	83,340	77,895	29,370	157		37		24,781	112,710	102,870	215,580	261 21

Sault Ste. Marie Canal.													
Canadian vessels, steam	2,464	454,256	513,922	118,014	82,150	6,101	2,629	128,394	134,992	706,765	733,693	1,440,458	
" sail	247	31,086	34,784	3,110	47,691	.....	.....	52,916	5,894	87,112	88,369	165,481	
Total Canadian	2,711	485,342	548,706	121,124	129,841	6,101	2,629	181,310	140,886	793,877	822,062	1,615,939	
United States vessels, steam	1,432	4,126	3,832	6,235	36,443	1,370,884	1,371,485	70,885	6,095	1,452,130	1,417,855	2,869,985	
" sail	208	661	647	425	11,182	126,813	120,791	16,303	.....	144,202	132,620	276,822	
Total United States	1,640	4,787	4,479	6,660	47,625	1,497,697	1,492,276	87,188	6,095	1,596,332	1,550,475	3,146,807	
Grand Total, Sault Ste. Marie Canal	4,351	490,129	553,185	127,784	177,466	1,503,798	1,494,905	268,498	146,981	2,390,209	2,372,537	4,762,746	

Department of Railways and Canals,
Ottawa, May 16, 1903.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 17.—Summary Statement showing the Number, Tonnage and Nationality of Vessels, &c.—*Concluded.*

RECAPITULATION.

Vessels.	Total Number	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Canadian Vessels. *Steam and Sail.*													$ cts.
Welland	955	120,794	133,824	110,094	9,004	917		7,258	83,405	239,063	226,233	465,296	7,861 66
St. Lawrence	8,446	1,080,535	878,528	61,653	368		453		104,551	1,142,188	983,900	2,126,088	18,206 46
Chambly	936	45,632	46,638	6,396					11,782	52,028	58,420	110,448	711 94
Ottawa	1,965	44,185	205,585		4,135					44,185	209,720	253,905	2,527 07
Rideau	3,673	67,396	65,789	12,466	109				14,445	79,862	80,343	160,205	1,564 55
St. Peter's	1,749	59,606	58,370					328		59,934	58,370	118,304	2,368 81
Trent Valley	2,599	74,533	74,095							74,533	74,095	148,628	710 55
Murray	733	83,235	77,434	28,650	157				24,543	111,885	102,134	214,019	253 89
Sault Ste. Marie	2,711	485,342	548,706	121,124	129,841	6,101	2,629	181,310	140,886	793,877	822,062	1,615,939	
Total Canadian	23,767	2,061,258	2,088,969	340,383	143,614	7,018	3,082	188,896	379,612	2,597,555	2,615,277	5,212,832	34,204 93
United States Vessels.													
Welland	832	181	243	65,072	4,339	219,646	176,845	2,437	102,937	287,336	284,364	571,700	9,028 94
St. Lawrence	1,252	4,983	13,071	93,007		18,844	20,256	16,582	94,382	133,416	127,709	261,125	2,098 47
Chambly	2,509	171	2,356	98,834					131,199	99,005	133,555	232,560	2,889 81
Ottawa	129	1,813			10,746					1,813	10,746	12,559	300 17
Rideau	293	1,740	3,285	915	2,449				985	2,655	6,719	9,374	178 52
St. Peter's	11	234	273		88			194		428	361	789	15 89
Trent Valley													
Murray	29	105	461	720			37		238	825	736	1,561	7 32
Sault Ste. Marie	1,640	4,787	4,479	6,660	47,625	1,497,697	1,492,276	87,188	6,095	1,596,332	1,550,475	3,146,807	
Total United States	6,695	14,014	24,168	265,208	65,247	1,736,187	1,689,414	106,401	335,836	2,121,810	2,114,665	4,236,475	14,519 12
Grand total, Canadian and United States	30,462	2,075,272	2,113,137	605,591	208,861	1,743,205	1,692,496	295,297	715,448	4,719,365	4,729,942	9,449,307	48,724 05

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 18.—Comparative Statement of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation 1902 and 1903, and the Amount of Tolls hitherto collected, now free, on the same, including Tolls on Vessels and Passengers.

Canals.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1902.												$ cts.
Welland	38,395	178,605	11,365	25,793	44,928	224,110	66	152,125	84,754	580,633	665,387	98,601 50
St. Lawrence	273,520	656,642	6,944	160	486	996	9,499	144,892	290,449	802,684	1,093,133	65,081 11
Chambly	12,607	16,236	254,160					96,439	266,767	112,675	379,442	22,713 31
Ottawa	82	411,055		33,545					82	444,600	444,682	24,852 37
Rideau	28,032	10,104	4,250	4,108				1,385	32,282	18,597	50,879	3,831 15
St. Peter's	31,716	41,422		200			200		31,916	41,622	73,538	3,034 14
Trent Valley	29,495	12,195							29,495	12,195	41,690	1,328 98
Murray	17,112	10,294	5,601					2,171	22,713	12,465	35,178	1,060 80
Sault Ste. Marie	108,126	727,927	25,892	278,678	470,414	2,775,536	180,478	162,217	784,910	3,944,358	4,729,268	No Tolls.
Grand Total	529,085	2,064,480	308,212	342,184	515,828	3,000,636	190,243	562,229	1,543,368	5,969,829	7,513,197	220,503 36
1903.												
Welland	64,380	189,802	51,763	30,350	149,151	221,074	4,796	291,603	270,090	732,829	1,002,919	136,842 89
St. Lawrence	322,851	852,190	117,407		338	5,661	18,001	364,758	458,597	1,222,609	1,681,206	123,189 47
Chambly	6,534	7,975	218,567					113,495	225,101	121,470	346,571	24,759 24
Ottawa	922	396,561		38,990					922	435,551	436,473	29,439 21
Rideau	24,168	21,640	1,913	6,317				7,082	26,081	35,039	61,120	4,999 77
St. Peter's	39,427	51,062		375					39,427	51,437	90,864	3,293 34
Trent Valley	26,094	16,313							26,094	16,313	42,407	1,508 07
Murray	12,118	11,585	6,066					620	18,184	12,205	30,389	1,134 98
Sault Ste. Marie	151,656	844,238	34,458	332,468	713,848	2,901,081	350,659	180,460	1,250,621	4,261,247	5,511,868	No Tolls.
Grand Total	648,150	2,391,366	430,174	408,500	863,337	3,130,816	373,456	958,018	2,315,117	6,888,700	9,203,817	325,166 97

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 19.—Comparative Statement of the Traffic on all the Canals, for the Years ended December 31, 1902 and 1903.

Articles.	1902.	1903.	Increase.	Decrease.
Class No. 1.	Tons.	Tons.	Tons.	Tons.
Canadian vessels, steam	2,814,214	3,383,786	569,572	
United States vessels, steam	3,318,779	3,562,930	244,151	
Canadian vessels, sail	1,671,481	1,829,046	157,565	
United States vessels, sail	767,660	673,545		94,115
Total, class No. 1	8,572,134	9,449,307	971,288	94,115
Class No. 2.	No.	No.	No.	No.
Passengers	188,086	236,823	48,737	
Class No. 3.	Tons.	Tons.	Tons.	Tons.
Bricks	17,934	11,086		6,898
Brimstone	785	2,014	1,229	
Cement and water lime	22,614	28,600	5,986	
Clay, lime and sand	102,654	117,244	14,590	
Fish	4,339	5,593	1,254	
Gypsum	831	1,498	667	
Iron, railway	43,794	93,746	49,952	
" pig	20,147	20,784	637	
" all other	54,975	59,678	4,703	
Steel	2,104	8,515	6,411	
Salt	29,451	32,844	3,393	
Stone, for cutting	3,228	359		2,869
Apples	7,695	13,480	5,785	
Barley	38,137	51,003	12,866	
Buckwheat	1,039	2,153	1,114	
Corn	81,645	338,132	256,487	
Cotton, raw	24	25	1	
Flax and hemp	635	3,775	3,140	
Flour	357,104	359,848	2,744	
Hay, pressed	41,537	50,129	8,592	
Meals, all kinds	29,321	29,989	668	
Oil cake	6,677	13,018	6,341	
Oats	46,717	66,621	19,904	
Pease	1,820	1,934	114	
Potatoes	4,802	6,804	2,002	
Rye	23,058	16,672		6,386
Flax seed	64,665	78,162	13,497	
Seeds, all kinds	8,303	6,828		1,475
Tobacco, raw	39	73	34	
Wheat	1,309,218	1,433,288	124,070	
All other agricultural products, vegetable	9,178	3,219		5,959
Bones	41	402	361	
Cattle	1,538	1,236		302
Hogs	314	384	70	
Hides and skins, horns and hoofs	286	265		21
Horses	1,258	1,573	315	
Lard and lard oil	2,868	802		2,066
Meats, other than pork	141	229	88	
Pork	1,740	1,313		427
Sheep	743	687		56
Tallow	478	159		319
Wool	2,188	2,601	413	
All other agricultural products, animal	7,965	10,633	2,668	
Total, class No. 3	2,354,080	2,877,398	550,096	26,778
Class No. 4.				
Ashes, pot and pearl	23	194	171	
Agricultural implements	873	589		284
Crockery and earthenware	947	1,400	453	
Dye woods and dye stuffs	142	137		5
Furniture	1,858	2,675	817	
Glass, all kinds	3,522	4,750	1,228	
Marble	1,262	1,521	259	
Manilla	737	1,108	371	
Molasses	1,426	1,777	351	
Nails	7,999	11,782	3,783	
Oil, in barrels	19,240	22,955	3,715	
Paint	1,953	2,645	692	
Pitch and tar	2,273	2,843	570	

No. (A) 19.—Comparative Statement of the Traffic on all the Canals for the Years ended Dec. 31, 1902 and 1903.—*Concluded.*

Articles.	1902.	1903.	Increase.	Decrease.
Class No. 4—Concluded.	Tons.	Tons.	Tons.	Tons.
Rags	847	833		14
Resin	4,639	4,434		205
Soda ash	1,150	1,555	405	
Sugar	14,353	8,190		6,163
Stone, wrought	1,407	111		1,296
Tin	2,869	1,255		1,614
Turpentine	290	126		164
White lead	450	572	122	
Whiting	664	930	266	
Whisky and all other spirits	2,876	5,000	2,124	
Merchandise, not enumerated	188,854	231,118	42,264	
Total, class No. 4	260,654	308,500	57,591	9,745
Class No. 5.				
Bark	478	209		269
Barrels, empty	1,067	1,693	626	
Boat knees				
Floats	61,252	44,797		16,455
Firewood, in vessels	307,172	320,765	13,593	
" in rafts	3,222	125		3,097
Lumber sawn, in vessels	557,607	583,522	25,915	
" in rafts	1,146	2,936	1,790	
Hoops		1	1	
Railway ties, in vessels	7,653	4,603		3,050
" in rafts	32	615	583	
Masts, spars and telegraph poles, in vessels	207	499	292	
" " in rafts	25,857	21,030		4,827
Square timber, in vessels	26,281	34,286	8,005	
" in rafts	19,593	7,522		12,071
Woodenware and wood partly manufactured	301	116		185
Shingles	9,817	12,720	2,903	
Split posts and fence rails, in vessels	374	2,105	1,731	
" " in rafts	20			20
Saw-logs	24,144	20,540		3,604
Staves and headings, barrel	85	96	11	
" " pipe				
" " West India				
" " salt barrel				
Traverses	100	20		80
Hop poles	18	2		16
Total, class No. 5	1,046,426	1,058,202	55,450	43,674
Special Class.				
Coal	782,053	1,590,595	808,542	
Kryolite or chemical ore	19,804	18,314		1,490
Iron ore	2,556,279	2,703,827	147,548	
Stone, unwrought, not suitable for cutting	30,193	18,517		11,676
Ice	15	1,080	1,065	
Total, special class	3,388,344	4,332,333	957,155	13,166
Total, freight	7,049,504	8,576,433	1,526,929	
Timber and other wood, free	68,615	68,487		128
Wheat, corn, flour, iron, salt, coal, &c., free	395,078	558,897	163,819	
Grand total, passengers and tonnage of vessels not included	7,513,197	9,203,817	1,690,748	128
Total, increase and decrease			1,784,111	93,491
Freight, grand total, increase			1,690,620	

Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Statistics.

APPENDIX A—*Continued.*

No. (A) 20.—Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1903.

Welland Canal.

	Canadian.				United States.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	20	160	4	32	22	176	3	24
10	8	80	2	20	2	80	13	130
15	5	75			6	90	2	30
20	3	60	1	20	2	40		
25	9	225			5	125	4	100
30	9	270	3	90	3	90	3	90
35	2	70			2	70		
40	3	120			1	40	1	40
50			2	100	1	50	1	50
55			2	110			2	110
60	3	180	5	300	1	60	1	60
65			1	65	1	65		
70					1	70	1	70
75			1	75	1	75	3	225
80							1	80
85	4	340	1	85	1	85		
90								
95	1	95			1	95		
100	1	100					3	300
110					2	220		
130					1	130		
150			1	150				
160					1	160		
165	2	330						
175			1	175	2	350		
190					1	190	1	190
195	1	195	1	195			1	195
220	1	220			1	220	2	440
230			1	230	2	460		
260					2	520		
265	1	265	1	265				
270			2	540			1	270
285			1	285			1	285
295			1	295				
300	1	300	1	300			1	300
305							1	305
310	1	310	1	310				
315	1	315	1	315	2	630	5	1,575
320	1	320	1	320			2	640
330	1	330	2	660	2	660		
360	2	720			2	720	1	360
400	1	400	2	800	2	800		
415	2	830			1	415		
435							3	1,305
455	1	455						
460	1	460	1	460	1	460	2	920
485	1	485	5	2,425	1	485	2	970
495	2	990						
500	1	500						
520							1	520
525			1	525				
530	1	530	1	530			1	530
540	1	540			1	540		
555	1	555			1	555		
560					1	560		
575	1	575						
585							3	1,755
595					1	595	1	595

No. (A) 20.—Statement of the Number and Tonnage of all kinds of Vessels, &c.—*Continued.*

Welland Canal—*Concluded.*

	Canadian.				United States.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
600	1	600					1	600
615					1	615	1	615
645			1	645	1	645		
660					2	1,320		
665	1	665						
675							1	675
690	1	690			1	690	1	690
719			1	719	1	719		
739							1	739
742	1	742	1	742				
771					1	771		
802					4	3,208	3	2,406
870					1	870	1	870
882			1	882				
908			1	908	4	3,632		
929					3	2,787		
940					3	2,820		
959					2	1,918		
977	1	977			1	977		
989	1	989	1	989	3	2,967		
994	2	1,988					1	994
1,023	2	2,046						
1,029					1	1,029		
1,035	1	1,035			2	2,070		
1,041			1	1,041	1	1,041		
1,054					1	1,054		
1,078					1	1,078		
1,079	1	1,079						
1,118	1	1,118			2	2,236		
1,160	2	2,320						
1,172	6	7,032			1	1,172		
1,202	1	1,202						
1,203	2	2,406			2	2,406		
1,330	1	1,330			1	1,330		
1,425					3	4,275		
1,441	3	4,323			1	1,441		
1,547					1	1,547		
1,550					4	6,200		
1,565					3	4,695		
1,762					1	1,762		
1,930					1	1,930		
Total...	121	41,942	54	15,603	131	69,086	77	20,053

St. Lawrence Canals.

8	25	200	2	16	2	16		
10	6	60	1	10	2	20	1	10
15	5	75	1	15	1	15		
20	5	100	2	40	2	40	1	20
25	8	200			3	75		
30	13	390	1	30	1	30		
35	3	105	1	35	2	70	1	35
40	5	200	2	80	4	160	3	120
45	3	135	1	45	1	45		
50	6	300	4	200	1	50	1	50
55	2	110			1	55		

No. (A) 20.—Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1903.

St. Lawrence Canals—*Continued.*

	Canadian.				United States.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
60	4	240	12	720	3	180		
65	1	65			2	130		
70	3	210	1	70				
75			1	75			1	75
80			1	80				
85	2	170	6	510			2	170
90	4	360	8	720			7	630
95	3	285	3	285	2	190	42	3,990
100	4	400	15	1,500			46	4,600
105	5	525	8	840	2	210	7	735
110	3	330	6	660	1	110	4	440
115	3	345	9	1,035	1	115	4	460
120	2	240	4	480	1	120	2	240
125	1	125	3	375			2	250
130	3	390			1	130		
135	1	135	4	540				
140	1	140	6	840	1	140	1	140
145	2	290	10	1,450				
150	1	150	18	2,700				
155	2	310	22	3,410				
160	1	160	12	1,920			2	320
165			7	1,155				
170			2	340				
175			4	700				
180					1	180		
185			5	925			1	185
190			1	190	1	190		
195	2	390	2	390				
200	1	200			1	200		
210	1	210						
225					1	225		
230	1	230	3	690				
240	1	240						
255			3	765				
260			1	260				
265	1	265	3	795				
275			1	275				
280	1	280						
285							2	570
290			2	580				
295			2	590				
300			5	1,500				
305			3	915				
310	1	310	1	310				
315			3	945				
320	1	320	3	960	1	320		
325	1	325	2	650				
330	1	330	1	330	1	330		
335			4	1,340				
340	1	340	1	340				
345			2	690			1	345
360	2	720	3	1,080				
365			3	1,095				
370			2	740				
375	1	375	2	750				
380			1	380				
385			1	385				
395			2	790				
412	2	824						
413			1	413				

No. (A) 20.—Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1903.

St. Lawrence Canals—*Concluded.*

Canadian.					United States.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
419			2	838			1	419
434			1	434				
439			2	878			1	439
440			1	440				
450	1	450						
462			1	462				
471	2	942						
475			1	475			1	475
479			2	958				
480	1	480	2	960				
484	1	484						
487			1	487				
499	1	499	1	499				
500	1	500						
508	1	508						
516			2	1,032				
518			2	1,036				
530	1	530						
539	1	539	1	539				
541	1	541	2	1,082				
544	1	544						
567			1	567				
578	1	578	1	578				
585			1	585			1	585
586	1	586	1	586				
590			1	590				
599	1	599						
607	1	607	2	1,214				
620					1	620		
648	2	1,296			1	648		
680			2	1,360				
715	1	715						
719			1	719				
740	1	740	1	740				
781	1	781						
803			1	803				
920					2	1,840		
929					1	929		
944					1	944		
952					1	952		
955					1	955	1	955
970	1	970						
987					2	1,974		
997	1	997			1	997		
1,020	1	1,020						
1,038	2	2,076						
1,041			1	1,041				
1,147					1	1,147		
1,171	1	1,171						
1,187	1	1,187						
1,190	1	1,190						
1,197	1	1,197						
1,201	1	1,201						
1,609					1	1,609		
2,080	1	2,080						
Total.....	177	37,112	274	58,852	53	15,961	136	16,258

No. (A) 20.—Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1903.

Rideau, Ottawa and Chambly Canals.

	Canadian.				United States.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	93	744	62	496	8	64	1	8
10	3	30	7	70	3	30		
15	12	180	4	60			1	15
20	6	120	5	100				
25	3	75	3	75	2	50		
30	1	30	1	30				
35	1	35	2	70	1	35		
40	2	80	2	80				
45	4	180	6	270				
50	4	200	6	300				
55	1	55	2	110				
60	1	60	2	120			1	60
65								
70	1	70						
75			3	225				
80			2	160			1	80
85	1	85	2	170			11	935
90			1	90			46	4,140
95	2	190	9	855			281	26,695
100	3	100	7	700			89	8,900
105			3	315			35	3,675
110			6	660			38	4,180
115							15	1,725
120	1	120	2	360			3	360
125	1	125	2	250			2	250
130			3	390			1	130
135			5	675			3	405
140	1	140	8	1,120				
145	1	145	6	870			1	45
150	1	150	15	225				
155			17	2,635				
160			5	800				
165			6	990				
170			2	340				
175			1	175				
180								
185			3	555				
190								
195	1	195	1	195				
200								
228	2	456						
262	1	262						
298	1	298						
300			3	900				
372	1	372						
374			1	374				
397	1	397						
Total...	150	4,894	215	15,810	14	179	529	51,603

Department of Railways and Canals,
Ottawa, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Concluded.*

No. (A) 21.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed through the Canals, during the Season of Navigation in 1903.

WELLAND CANAL.

	CANADIAN.						UNITED STATES.					
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	250 to 1,930 tons	49	39,422	1	250 to 1,936 tons	28	13,956	1	250 to 1,930 tons	71	66,145	1	250 to 1,930 tons	35	17,919
2	200 " 249 "	1	220	2	200 " 249 "	1	230	2	200 " 249 "	3	680	2	200 " 249 "	2	440
3	150 " 199 "	3	525	3	150 " 199 "	3	520	3	150 " 199 "	4	700	3	150 " 199 "	2	385
4	100 " 149 "	1	100	4	100 " 149 "	3	520	4	100 " 149 "	3	350	4	100 " 149 "	3	300
5	50 " 99 "	8	615	5	50 " 99 "	12	735	5	50 " 99 "	7	500	5	50 " 99 "	9	595
6	Under 50 "	59	1,060	6	Under 50 "	10	162	6	Under 50 "	43	711	6	Under 50 "	26	414
	Total	121	41,942		Total	54	15,603		Total	131	69,086		Total	77	20,953

ST. LAWRENCE CANALS.

1	250 to 2,080 tons	44	29,097	1	250 to 1,041 tons	86	35,781	1	250 to 1,609 tons	15	13,265	1	250 to 955 tons	8	3,788
2	200 " 249 "	4	880	2	200 " 249 "	3	690	2	200 " 249 "	2	425	2	200 " 249 "	.....	.....
3	150 " 199 "	6	1,010	3	150 " 199 "	73	11,730	3	150 " 199 "	2	370	3	150 " 199 "	3	505
4	100 " 149 "	25	2,920	4	100 " 149 "	65	7,720	4	100 " 149 "	7	825	4	100 " 149 "	66	6,865
5	50 " 99 "	25	1,740	5	50 " 99 "	36	2,660	5	50 " 99 "	9	605	5	50 " 99 "	53	4,915
6	Under 50 "	73	1,465	6	Under 50 "	11	271	6	Under 50 "	18	171	6	Under 50 "	6	185
	Total	177	37,112		Total	274	58,852		Total	53	15,961		Total	136	16,258

RIDEAU, OTTAWA AND CHAMBLY CANALS.

1	250 to 397 tons	1	1,329	1	250 to 374 tons	4	1,274	1	250 to — tons	.....	.....	1	250 to — tons	....	.....
2	200 " 249 "	2	456	2	200 " 249 "	.....	.....	2	200 " 249 "	.....	.....	2	200 " 249 "	.....	.....
3	150 " 199 "	2	345	3	150 " 199 "	50	5,915	3	150 " 199 "	.....	.....	3	150 " 199 "	.....	.....
4	100 " 149 "	7	730	4	100 " 149 "	42	5,340	4	100 " 149 "	.....	.....	4	100 " 149 "	187	19,670
5	50 " 99 "	10	660	5	50 " 99 "	27	2,030	5	50 " 99 "	.....	.....	5	50 " 99 "	340	31,910
6	Under 50 "	125	1,474	6	Under 50 "	92	1,251	6	Under 50 "	14	179	6	Under 50 "	2	23
	Total	150	4,894		Total	215	15,810		Total	14	179		Total	529	51,603

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, May 16, 1904.

RICHARD DEVLIN,
Compiler of Canal Statistics.

CANALS

CONSOLIDATED

No. 22.—RATES OF TOLLS ON THE CANALS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS.

(O. C., April 18, 1873.)

The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock.	Rideau Canal, each way.	Ottawa Canals, and St. Ann's Lock, each way.	Ottawa to St. Johns, each way.	Murray Canal, each way.
Class No. 1.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Vessel, steam.....per ton	01½	0 01½	0 02¼	0 00¾	0 00¾	0 01½	0 00⅝	0 01½	0 $\frac{3}{32}$
" sail and other.....	0 02¼	0 02¼	0 03¾	0 01½	0 01¼	0 02¼	0 01	0 02⅝	0 $\frac{1}{16}$
Class No. 2.									
Passengers, 21 years of age and upwards...	0 10	0 10	0 20	0 10	0 05	0 08	0 02¼	0 09¾	0 1¼
" under 21 years each.....	0 05	0 05	0 10	0 05	0 02	0 04	0 01¼	0 04½	0 0⅝
Class No. 3.									
Bricks, cement and water lime.....									
Clay, lime and sand.....									
Brimstone.....									
Corn.....									
Flour.....									
Iron, railway.....									
" pig.....									
" all other, including steel (O.C., Feb. 1, 1888).....	15	0 20	0 20	0 15	0 10	0 07	0 06	0 19¾	0 1⅞
Plaster, gypsum.....									
Salt.....									
Salt meats or fish, in barrels or otherwise...									
Agricultural products, vegetable, not enumerated.....									
Agricultural products, animal, not enumerated.....									
Stone, for cutting.....									
Wheat.....									
Class No. 4.									
All other articles not enumerated.....	0 15	20	0 20	0 20	0 10	0 26	0 14	0 29	0 2½

REVENUE.

TARIFF OF TOLLS.

OF THE DOMINION OF CANADA, 1902.—(1903—Free, O.C., April 27, 1903.)

TRENT VALLEY CANALS.

(O. C., July 25, 1888.)

1st Section.	2nd Section.	3rd Section.	4th Section.	Through.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	Tolls Chargeable at Peterborough and Hastings.
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Bobcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
0 00 3/16 0 00 1/4	0 00 3/16 0 00 1/4	0 00 3/16 0 00 1/4	0 00 3/16 0 00 1/4	0 00 3/4 0 01	0 00 3/16 0 00 1/4
01 0 00 1/2	0 01 0 00 1/2	0 01 0 00 1/2	0 01 0 00 1/2	0 04 0 02	0 01 0 00 1/2
0 01	01	01	01	0 04	0 01
0 03	0 03	0 03	0	0 1	0 0

RATES OF TOLLS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS

The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals and St. Ann's Lock, each way.	Ottawa to St. Johns, each way.	Murray Canal, each way.
Class No. 5.									
Bark	0 20	0 20	0 20	0 15	0 10	0 07	0 06	0 19½	0 01⅞
Barrels, empty, each	0 02	0 02	0 02	0 02	0 02	0 02	0 01	0 03½	0 00¼
Boat knees, each	0 05	0 05	0 05	0 02	0 02	0 02	0 01	0 03½	0 00¼
Floats, per 1,000 lineal feet	1 40	1 40	1 40	1 40	1 20	1 05	0 50	2 05	0 17½
Firewood, per cord, in vessels	0 20	0 20	0 20	0 20	0 10	0 15	0 08	0 23	0 02½
" " rafts	0 25	0 25	0 25	0 25	0 15	0 19	0 09	0 30¼	0 03⅜
Hoops	0 25	0 25	0 25	0 20	0 15	0 15	0 10	0 30	0 02½
Masts and spars, telegraph poles, per ton of 40 cubic feet, in vessels	0 15	0 15	0 15	0 05	0 05	0 08	0 07	0 13¼	0 00⅝
Masts and spars, telegraph poles, per ton of 40 cubic feet, in rafts	0 20	0 20	0 20	0 10	0 10	0 15	0 10	0 22½	0 01¼
Railway ties, in vessels, each	0 01	0 01	0 01	0 00½	0 00½	0 00¾	0 00¾	0 01⅝	0 00⅛
" rafts, each	0 02	0 02	0 02	0 01	0 01	0 02	0 01	0 02¼	0 00⅛
Sawed stuff, boards, plank, scantling and sawed timber, per M feet, board measure, in vessels	0 30	0 30	0 30	0 15	0 10	0 11¼	0 06¾	0 20	0 01⅞
Sawed stuff, boards, plank, scantling and sawed timber, per M feet, board measure, in rafts	0 60	0 60	0 60	0 30	0 20	0 19	0 09	0 36½	0 03¾
Square timber, per M cubic feet, in vessels	3 00	3 00	3 00	1 00	1 00	0 56	0 44	1 69	0 12½
" " rafts	4 50	4 50	4 50	2 00	2 00	1 12	0 63	3 13	0 25
Wagon stuff, woodenware and wood, partly manufactured, per ton of 40 cubic feet	0 40	0 40	0 40	0 40	0 25	0 30	0 20	0 55	0 05
Shingles, per M	0 06	0 06	0 06	0 06	0 04	0 04½	0 02½	0 08	0 00¾
Split posts and fence rails, per M, in vessels	0 40	0 40	0 40	0 40	0 20	0 23	0 12	0 42	0 05
" " " rafts	0 80	0 80	0 80	0 80	0 40	0 38	0 17	0 77	0 10
Saw-logs, each, standard log	0 08	0 08	0 08	0 08	0 05	0 06	0 06	0 13	0 01
Staves and headings, barrel, per M	0 08	0 08	0 08	0 04	0 15	0 15	0 10	0 30	0 02½
" " pipe, per M	1 50	1 50	1 50	1 00	1 00	0 75	0 50	1 75	0 12½
" " West India, per M	0 75	0 75	0 75	0 60	0 25	0 45	0 25	0 65	0 07½
" " salt barrel, sawn or cut, per M	0 08	0 08	0 08	0 04	0 03	0 03	0 02	0 06	0 00½
Traverses, per 100 pieces	0 50	0 50	0 50	0 50	0 40	0 38	0 15	0 67½	0 06¾
Hop poles, per 1,000 pieces	2 00	2 00	2 00	2 00	1 50	1 50	0 65	2 65	0 25
Special Class.									
Gypsum, crude (per O.C., Oct. 28, 1892)	0 15	0 05	0 05	0 05	Westward				
Coal	0 20	0 20	0 20	0 15	0 10	0 08	0 05	0 17¾	0 01⅞
Stone, unwrought, carded, and not suitable for cutting, per cord	0 75	0 75	0 75	0 60	0 37½	0 28	0 24	0 77½	0 07½
Kryolite, iron ore or chemical ore	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05
Ice	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 11	0 0

ON THE CANALS—*Continued.*

TRENT VALLEY CANALS.

1st Section.	2nd Section.	3rd Section.	4th Section.	Through.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Babcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Peterborough and Hastings.
$ cts.	$ cst.	$ cts.	$ cts.	$ cts.	$ cts.
0 01	0 01	0 01	0 01	0 04	0 01
0 00¼	0 00¼	0 00¼	0 00¼	0 01	0 00¼
0 00¼	0 00¼	0 00¼	0 00¼	0 01	0 00¼
0 13	0 13	0 13	0 13	0 52	0 13
0 03	0 03	0 03	0 03	0 10	0 03
0 04	0 04	0 04	0 04	0 14	0 04
0 02	0 02	0 02	0 02	0 08	0 02
0 02	0 02	0 02	0 02	0 08	0 02
0 01	0 01	0 01	0 01	0 04	0 01
0 00½	0 00½	0 00½	0 00½	0 01	0 00½
0 00¼	0 00¼	0 00¼	0 00¼	0 01	0 00¼
0 03	0 03	0 03	0 03	0 10	0 03
0 04	0 04	0 04	0 04	0 14	0 04
0 07	0 07	0 07	0 07	0 28	0 07
0 14	0 14	0 14	0 14	0 56	0 14
0 04	0 04	0 04	0 04	0 16	0 04
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
0 03	0 03	0 03	0 03	0 12	0 03
0 05	0 05	0 05	0 05	0 20	0 05
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
0 02	0 02	0 02	0 02	0 08	0 02
0 10	0 10	0 10	0 10	0 40	0 10
0 05½	0 05½	0 05½	0 05½	0 22	0 05½
0 00½	0 00½	0 00½	0 00½	0 02	0 00½
0 05	0 05	0 05	0 05	0 20	0 05
0 20	0 20	0 20	0 20	0 80	0 20
Free.	Free.	Free.	Free.	Free.	Free.
0 01	0 01	0 01	0 01	0 04	0 01
0 03½	0 03½	0 03½	0 03½	0 14	0 03½
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
Free.	Free.	Free.	Free.	Free.	Free

St. Peter's Canal.

Sec. **2.** On each and every vessel passing through the said canal, two cents per ton on the vessel and one cent per ton on the freight, each way. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 109. Free, O.C., April 27, 1903.

SPECIAL REGULATIONS RELATING TO TOLLS ON SOME OF THE CANALS.

Sec. **3.** Coal may pass up all canals, except the Welland Canal, free of toll. O. C. June 6, 1869. Con. O. C. Oct. 26, 1889, sec. 83. Free, O.C., April 27, 1903.

Sec. **4.** Logs, lumber or other produce may pass free of toll down the Chippawa Creek, between the Aqueduct and Port Robinson. O. C. May 18, 1863. Con. O. C. Oct. 26, 1889, sec. 84.

Sec. **5.** (*a.*) In view of the dam constructed across the Ottawa River at Carillon whereby the passage of the rapids at that point through the river is rendered difficult and at times impracticable, it appears necessary, owing to the continued difficulty attending passage through the slide built in the dam, that the canal should be used by rafts and until otherwise ordered, free passage be given to rafts through the Carillon Canal, subject to such regulations as the Department of Railways and Canals may find necessary in the interest of the trafic of the canal to adopt. O. C. July 6, 1888.

Sec. **5.** (*b.*) "Save in cases for which special permission may be given the Grenville Canal is closed to the passage of rafts, or any portion of a raft of any kind whatever." O. C. June 27, 1890.

Sault Ste. Marie Canal.

Sec. **6.** All vessels and freight shall be permitted to pass through the Sault Ste. Marie Canal free of toll upon such vessels and freight, until otherwise ordered.

Sec. **7.** (*a.*) All up bound goods on which full tolls have been paid for passage through the whole of the St. Lawrence Canals, or for passage through the Lachine Canal, the Ottawa and Rideau Canals or for passage through the Ottawa and Rideau Canals shall be entitled to pass free through the Welland Canal, or any portion thereof, and tolls paid for passage through the Chambly Canal, on goods thereafter so becoming entitled to the above privilege, shall be refunded at Montreal. All down bound goods on which full tolls have been paid for passage through the Welland Canal shall be entitled to pass free through any or all of the above mentioned Canals, or through any portion thereof. O. C. May 17, 1897.

(*b.*) All articles, goods or merchandise, not enumerated above, shall be charged to class No. 4. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 86.

Sec. **8.** Goods shipped to any port west of the St. Lawrence Canals, tolls upon which have already been paid for passage through such canals, may be re-shipped from such port and be passed through the Welland Canal free of tolls, in the same way as if they had been shipped through direct in the first instance; and goods going eastward, having paid Welland Canal tolls, may be transhipped at any port on Lake Ontario, and thereafter pass free through the St. Lawrence Canals, as if they had been shipped through direct in the first instance. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 87.

Sec. **9.** Iron ore, kryolite or chemical ore, may pass through one section, or through all the canal sections aforesaid, for 5 cents per ton. Free, O.C., April 27, 1903.

Sec. **10.** No let-passes shall be issued to steam tugs or other small vessels for less than 25 cents, as a minimum charge; but such vessels, not carrying freight or passengers, can obtain, on payment of $30 a season "Let-Pass," which will pass them up and down the canals as often as desired. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 86. Free, O.C., April 27, 1903.

Sec **11.** All vessels owned or chartered by persons having contracts for the enlargements or repair of any of the canals, and employed by them in removing earth or carrying materials necessary for the prosecution of such works, shall be entitled to pass through such canals free of toll upon such vessel and cargo. O. C. April 22, 1884. Con. O. C. Oct. 26, 1889, sec. 35.

Sec. **12.** Government dredges and scows shall be permitted to pass through the canals free of tolls, but that such dredges and scows shall not be so passed as to interfere with the passage of other vessels of any kind whatever. O. C. May 18, 1891.

HARBOUR DUES.

Sec. **13.** Vessels receiving or discharging freight at the premises of the Welland Railway, at Ports Colborne or Dalhousie, are to be free from harbour dues; but all other vessels discharging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of freight so received or discharged, two cents. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889.

WAY RATES.

Sec. **14.** The following way rates are to be levied on vessels and property passing the several subdivisions of the Canals:—

Welland Canal.

	Rate.
1. From Port Maitland, Dunnville and Port Colborne to Port Robinson or Allanburg, not passing the lock, each way	1/32
2. From Chippawa Cut, or any part thereof, to Dunnville, Port Maitland or Port Colborne	1/32
3. From Dunnville to Port Colborne	1/32
4. From Thorold to St. Catharines or Port Dalhousie	1/32
5. From Maitland, Dunnville, Colborne or Port Robinson to Marshville and intermediate places	1/32
6. From Marshville or intermediate places to Port Maitland, Dunnville, Port Colborne and Port Robinson	1/32
7. From Port Robinson to Allanburg or Thorold	1/32
8. From Port Robinson to St. Catharines or Port Dalhousie	1/32
9. From St. Catharines to Port Dalhousie	1/8
10. From Dunnville to Maitland	1/4
11. From Port Robinson through the Lock and Chippawa Cut	1/4
12. Form Port Colborne to Port Maitland	1/32
13. From Chippawa Cut through Lock to Port Robinson	1/4
14. From Colborne, Dunnville, Maitland and Marshville to Thorold	1/32
15. From Colborne, Dunnville, Maitland and Marshville to St. Catharines	1/32
16. Through the Chippawa Cut only	1/8
17. Through the Port Robinson Lock only	1/8

St. Lawrence Canals.

Sec. **15.** The navigation is divided into four sections, viz., Cardinal, Cornwall, Beauharnois or Soulanges and Lachine. Tolls are to be levied on all vessels and property in proportion to the number of sections passed through.

Chambly Canal.

	Rate.
Sec. **16.** Vessels and property passing from Sorel to Chambly, to pay	1/32
Vessels and property passing from Chambly to St. Johns, to pay	1/32

Ottawa Canals.

Sec. **17.** The navigation is divided into three sections, viz., Grenville, Carillon and Ste. Anne's. Tolls are to be levied on all vessels and property in proportion to the number of sections passed through.

Rideau Canal.

Sec. **18.** The navigation of this canal is divided into three sections, viz., Ottawa, Smith's Falls and Kingston Mills. Vessels and freight passing one section are to be charged one-third; two sections, two-thirds. O.C. April 18, 1873. Con. O.C. Oct. 26, 1889, secs. 77, 78, 79, 80 and 81.—

Tay Canal to be part of the Rideau Canal and the following rates of tolls to be levied upon the said Tay Branch of the Rideau Canal system, viz.:—

Perth to Smith's Falls, 1 section, or one-third of Rideau Canal rates, each way.

Perth to Kingston, 2 sections, or two-thirds Rideau Canal rates, each way.

Perth to Ottawa Basin, 2 sections, or two-thirds Rideau Canal rates, each way.

Perth to River Ottawa, 3 sections, full Rideau Canal rates, each way. O.C. Sept. 27, 1890.

General.

Sec. **19.** (*a.*) Any fraction of a ton freight is to be charged one ton, and portions of sections are to be charged as a whole section on all the above canals.

(*b.*) The passing of saw-logs or other lumber through any of the canals, or sections thereof, shall be at all times governed by the regulations for their management. O.C. April 18, 1873. Con. O.C. Oct. 26, 1889, sec. 82.

Sec. 20.—STANDARD FOR ESTIMATING WEIGHTS, FOR CANAL TOLLS.

——	Tons.	——	Tons.
2,000 lbs. avoirdupois	1	Sheep, 20	1
Per M. is per thousand feet		Stone, 12 cubic feet	1
Per mile is per thousand pieces		Stone, 1 cord	7½
Green fruit, 9 barrels are	1	Whisky, 4 barrels or 215 gallons	1
Ashes, 3 barrels are	1	Empty barrels, 10	1
Bark, 4 cords	1	Barrel hoops, 10 mille	1
Beef, 7 barrels	1	Board and other sawed lumber, 600 feet board measure	1
Biscuit and crackers, 9 barrels	1	Boat knees, 4	1
Bricks, common, 1,000	2	Firewood, 1 cord	3
Butter, 22 kegs or 7 barrels	1	Hop poles, 60 or 40 cubic feet	1
Cattle, 3	1	Shingles, 12 M. or bundles	1
Cement and water lime, 7 barrels	1	Split posts and fence rails, 1 mille	1
Fire-bricks, 1,000	3	Staves and headings, pipe, 1 mille	8
Fish, 7 barrels	1	" " W. India, 1 mille	4
Flour, 9 barrels	1	" " barrel, 1 mille	2⅓
Gypsum and manganese, 6 barrels	1	" " salt barrel, 1 mille	0⅔
Horses, 2	1	Saw-logs, standard, 1	0⅞
Lard and tallow, 7 barrels or 22 kegs	1	Square timber, 50 cubic feet	1
Liquors and spirits, 215 gallons	1	Telegraph poles, 10, or 40 cubic feet	1
Liquids, all others, 215 gallons	1	Masts and spars, 40 cubic feet	1
Nuts, 9 barrels	1	Railroad ties, 16, or 50 cubic feet	1
Oysters, 6 barrels	1	All other woodenware, or partly manufactured wood, 40 cubic feet as per tariff	1
Pork, 7 barrels	1	Traverses, 40 cubic feet, or 5 pieces	1
Refined oil in bulk, 250 gals., O.C., July 24, '00	1	Floats, 50 lineal feet	1
Salt, 7 barrels	1		
Seeds, 9 barrels	1		

NOTE.—By the Weights and Measures Act, chapter 104 of the Revised Statutes of Canada, section 14, all the following named articles are to be estimated by the cental of 100 lbs.

The weight equivalent to a bushel being as follows:—Wheat, 60 lbs.; Indian corn, 56 lbs.; rye, 56 lbs.; pease, 60 lbs.; barley, 48 lbs.; oats, 34 lbs.; beans, 60 lbs.; clover seed, 60 lbs.; timothy seed, 48 lbs.; buckwheat, 48 lbs.; flax seed, 50 lbs.; blue grass seed, 14 lbs.; hemp seed, 44 lbs.; malt, 36 lbs.; castor beans, 40 lbs.; potatoes, turnips, carrots, parsnips, beets and onions, 60 lbs.; bituminous coal, 70 lbs.

TOLLS AT SHEDS AT LACHINE CANAL BASIN.

Sec. 21. The following tolls shall be levied upon property stored at the sheds at the Lachine Canal Basin:—

		Cents.
Wheat and other grain, per week,	per bushel	1
Meal "	per barrel	4
Pork, beef, butter and lard "	"	5
Muscovado sugar "	per hhd., 10 cents; per brl	5
Liquors "	per pipe, 15 cents; per pun	12
	per hhd., 10 cents; per qr. cask	7
Iron, bars "	per ton	24
Iron, pig "	"	12
Salt, except at the St. Gabriel sheds "	per 100 minots	36
Salt at the St. Gabriel sheds, Montreal, after the first 48 hours "	per bag	½
Bales, crates, cases, &c. "	per ton weight or measurement	24
Coals "	per chaldron	12

Sec. 22. (*a.*) No charge shall be made for property stored in the sheds of the Lachine Canal Basin for the first forty-eight hours, after which period, except in the case of flour, the foregoing rate of storage for the use of the sheds are to be raised, levied and collected.

(*b.*) Articles unenumerated are to be charged according to the above rates as nearly as the same can be computed.

(*c.*) All property stored in the sheds remaining after the first forty-eight hours will be liable to one week's storage, although it should only have been stored for a portion of the same, and so on for each succeeding week.

(*d.*) The labour of receiving property into the sheds and delivering the same shall be at the expense of and be furnished by the owners of the property or their agents.

(*e.*) All property stored in these sheds shall be at the risk of the proprietor from damage by fire or otherwise.

f.) All dues for storage shall be paid before the removal of the property. O. C. August 21, 1846, October 28, 1846. Con. O. C. Oct. 26, 1889, secs. 90 and 91.

Flour.

Sec. **23.** (*a.*) Flour shall be allowed to remain in the sheds for two whole days free of charge.

(*b.*) If kept there beyond two days or 48 hours, such flour shall be liable to a charge of one cent per day per barrel for the first four days after the expiration of the 48 hours of the exemption.

(*c.*) Should the flour be kept in the sheds beyond four days at one cent per day per barrel, it shall be liable to pay two cents per day per barrel for every day subsequent to the expiration of such four days.

(*d.*) Any part of a day shall be considered as one day. O. C. May 31, 1856. Con. O. C. Oct. 26, 1889, sec. 92.

WHARFAGE DUES ON COAL FOR LOCAL CONSUMPTION IN MONTREAL.

Sec. **24.** Coal for local consumption in Montreal, landed on canal property between Montreal Harbour and Lachine, O.C., April 22, 1902, from vessels other than sea-going, and entering the Lachine Canal from Montreal Harbour, shall be charged wharfage dues at the rate of five cents a ton.

Coal screening shall be charged 3 cents a ton. Con. O. C. Oct. 26, 1889, sec. 93. O. C. May, 18, 1892.

CHARGES FOR WHARFAGE ON FIREWOOD ON WHARFS AND BANKS OF LACHINE CANAL.

Sec. **25.** The following rates of tolls shall be collected as herein mentioned that is to say:—

(*a.*) Firewood landed on wharfs or banks of the Lachine Canal, or in boats, barges or other craft occupying any of the basins between Wellington Street Bridge and Lock No. 3, four cents per cord, and for every day the wood is allowed to remain in either the canal or basin, or on the wharfs or banks after the first five days, an additional charge of four cents per cord. O. C. August 7, 1860. Con. O. C. Oct. 26, 1889, sec. 94.

(*b.*) The clause next preceding shall not only apply to the rates of toll to be collected on firewood on wharfs at Lachine and the Lachine Canal and basin, but are also extended and made applicable to the banks and grounds at Côte St. Paul and at Lachine. O. C. Jan. 27, 1862. Con. O. C. 1889, sec. 94.

CANAL BASINS IN MONTREAL PART OF MONTREAL HARBOUR.

Sec. **26.** Whereas under existing regulations for the collection of canal tolls, eastern bound vessels having paid the charges one way in full through the Welland Canal are chargeable one Section Canal Toll if re-entering the Lachine Canal;

And whereas vessels loaded with grain destined for the Montreal Harbour frequently unload only part of their cargoes on board sea-going vessels in the harbour, and re-enter the Lachine Canal for the purpose of unloading the balance of their cargoes either in elevators or mills located along the canal basins;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, in so far only as regards the collection of tolls on the class of vessels above referred to, which re-enter that portion of the canal for the purpose of unloading the balance of their cargoes, but that the same shall not apply any further, as in the event of vessels returning to the harbour to take cargo, in which case the usual toll shall be charged against them on passing out of the canal a second time into the harbour. O. C. Aug. 8, 1878. Con. O. C. Oct. 26, 1889, sec. 95. Free O.C. April 27, 1903.

PHOSPHATES.

Sec. **27.** Whereas vessels laden with grain for delivery in Montreal Harbour frequently carry also deck loads of phosphates, and being compelled to proceed at once to the harbour for the discharge of the grain, they pay tolls through to that point, subsequently re-entering the Lachine Canal for the storage of the phosphates, and in accordance with the existing regulations, paying canal dues a second time for such re-entry;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, for the purpose of the unloading of phosphates carried by vessels in addition to their grain cargoes as described in this section; it being, however, provided that in the event of their returning to the harbour to take cargo, the usual tolls shall be charged against such vessels on their passing out of the canal a second time. O. C. July 12, 1881. Con. O. C. Oct. 26, 1889, sec. 96. Free, O.C., April 27, 1903.

Extract from the Act, Canada, 1894, c. 48, amending and consolidating the Acts relating to the Harbour Commissioners of Montreal.

HARBOUR RATES WHARFAGE DUES IN ALL BASINS OF THE LACHINE CANAL ON SEA-GOING VESSELS.

Sec. **28.** The corporation may, from time to time, levy such rates as are approved of by the Governor in Council, upon all goods landed or shipped in the harbour, moved by rail on the harbour tracks, or deposited within the harbour, except arms, ammunition and military accoutrements, and other munitions of war for the use of the Government or for the defence of the Dominion. 40 V., c. 53, s. 2, part 2. For the purposes of this section, the lower basins of the Lachine Canal shall be held to form part of the harbour of Montreal, and the corporation may levy from all vessels entering the same through the harbour for the purpose of discharging or loading there, except canal craft trading between Montreal and places above Montreal, the same rates as may be levied in the harbour and under the same regulations and penalties. In all other respects the said lower basins shall be and remain under the jurisdiction of the Minister of Railways and Canals. 18 V., c. 143, s. 18; 40 V., c. 53, s. 2, part 2.

All property delivered or received by sea-going vessels in the Lachine Canal basins at Montreal (except the old lower basin) shall be charged wharfage dues as follows:—

All goods, wares and merchandise not elsewhere specified	25	cents per ton.
Hay, straw, pig and scrap iron, pot and pearl ashes	20	"
Apples, crates and their contents, flour and meal, fish, meats, pitch, potatoes, tar, horses, neat cattle, sheep and swine	15	"
Ballast, clay, fire-bricks, gypsum, lime, marble, phosphate, sand, salt	10	"
Coal and coke, grain and seeds of all kinds	6	"
Special—Bricks, 10 cents per 1,000; cordwood, 5 cents per cord; lumber, 10 cents per 1,000 feet, board measure.		
Bullion specie	Free.	
Coal screenings	3	"

Each entry shall pay not less than 5 cents.

All property landed on the canal wharfs for re-shipment, or transhipped in canal waters, shall pay one wharfage only.

Lumber upon which tolls have been paid for passage down the Lachine Canal, and which is re-shipped from the wharfs or vessels into sea-going vessels, shall pay wharfage dues equal to one section of canal tolls, viz., $3\frac{3}{4}$ cents per 1,000 feet board measure. O.C. Jan. 26, 1883. Con. O.C. Oct. 26, 1889, secs. 98, 99, 100 and 101. O.C. May 18, 1892.

Sec. **29.**—*Standard for Estimating Weights.*

Ashes, pot or pearl	3	brls.	to 1 ton.
Apples, flour, meal, potatoes	9	"	1 "
Fish, meat, pitch, tar	7	"	1 "
Horses	2	to 1	ton.
Neat cattle	3	to 1	"
Sheep	15	to 1	"
Swine	10	to 1	"

O.C. April 1, 1881. Con. O.C. Oct. 26, 1889, sec. 102.

TOLLS ON FLOATED TIMBER, ETC., ENTERING THE BASIN AT LACHINE.

Sec. **30.** The following rates of tolls shall be collected on floated timber, lumber and firewood entering the basin at Lachine and Lachine Canal:—

Kinds of Timber.	For receiving Timber, &c., to include use of Basin and Wharf for one Month.	For each succeeding month during the Season of Navigation.	For Wintering in Basin or on Wharf.
	Cents.	Cents.	Cents
Timber, square or round, of all kinds, above 12 x 12, per M cubic feet	25	20	35
Timber, round or flatted, of all kinds, under 12 x 12, per M lineal feet	20	15	30
Planks and boards to include all kinds of sawed lumber in rafts, per M feet, board measure	3	2	3
Saw logs, 12 feet long, if longer in same proportion per log	1	1	2
Floats, per 100	10	5	10
Traverses, per 100	10	5	10
Fence posts and rails, per M	10	5	10
Staves, barrel, per M	8	4	8
" pipe "	8	4	8
" West India, per M	8	4	8
Firewood on bank of canal between Lock No. 3 and Lock No. 5, and also on wharfs in canal basin at Lachine	3	3	3

Note.

Sec. **31.** (*a.*) No allowance shall be made for fractional parts of a month or winter season.

(*b.*) The firewood shall be corded across the bank while being delivered from the boat in such manner and at such points as the superintending engineer may direct.

(*c.*) The rates on timber to take effect upon the completion of the booms in Lachine Canal. O.C. June 8, 1860. Con. O.C. Oct. 26, 1889, secs. 103 and 104.

CHARGES ON VESSELS WINTERING IN LACHINE AND WELLAND CANALS.

Sec. **32.** The following rates per ton shall be charged for wintering vessels in the Lachine Canal, viz. :—For each boat, barge, scow or other vessel of ten tons measurement or under, seventy cents per vessel for the entire winter, and every ten tons above the first ten, an additional rate of eight cents, O.C. Aug. 22, 1879. Con. O.C. Oct. 26, 1889, sec. 97.

Sec. **32** (*a.*) The above rates shall also apply to the Welland Canal. (O.C. June 8th. 1901.)

CHARGES FOR WINTERING VESSELS IN RIDEAU CANAL.

Sec. **33.** The winterage dues for vessels wintering in the canal basin, at Ottawa, or other points along the line of the Rideau Canal, shall be as follows :—

In canal basin, Ottawa, steamers per season			$ 8 00
"	" barges	"	4 00
Inside locks	" steamers	"	50 00
other stations	"	"	15 00

If the Minister of Railways and Canals deems it advisable, he is authorized to take security from parties wintering their vessels in locks against damage to Government property by fire. O.C. March 19, 1887. Con. O.C. Oct. 26, 1889, sec. 105.

CHARGES FOR WINTERING VESSELS IN THE OTTAWA RIVER CANALS AND LOCKS.

Sec. **34.** The charge for vessels wintering on the Ottawa River canals and locks, and the same is hereby prescribed accordingly, namely :

In Carillon Canal, steamers per season			$ 8 00
"	barges	"	4 00
Grenville Canal,	steamers	"	8 00
"	barges	"	4 00
Inside Locks, Ste. Anne, Carillon and Grenville Canals, steamers per season			25 00
"	Culbute Canal, per season		15 00

Such security against damage by fire to be taken by way of bond as, in the opinion of the Minister of Railways and Canals, may seem desirable. O.C. Oct. 14, 1892.

Sec. **35.** No charges to be made for vessels wintering outside the locks of any government canal. O.C. Dec. 12, 1889.

CHARGES FOR REPAIRING VESSELS ON THE BANKS OF CANALS.

Sec. **36.** (*a.*) Persons using the banks of the Lachine Canal as a site for the repair of their vessels shall be subject to a charge of four dollars, payable in advance, for each vessel; the period during which such site may be occupied under any one payment being limited to six months, and permission for repairing being first obtained from the proper officer, in conformity with the existing canal regulations.

(*b.*) In the event of failure to remove vessels so occupying the banks at the expiration of the period named, no fresh permits having been obtained, such vessels may be sold under the 16th section of the canal regulations. O.C. March 5, 1880. Con. O.C. Oct. 26, 1889, sec. 106.

Sec. **37.** Rules with respect to the repairing of vessels on the banks of the Lachine Canal, the Beauharnois and the Chambly :—

(*a.*) Repairs shall only be executed at such points as may be indicated and approved by the superintending engineer.

(*b.*) For each vessel hauled up or beached for repairs, a charge of one dollar, over and above all other charges, shall be made, carrying the privilege of remaining one month, a further sum of one dollar being charged for each additional month, or fraction of a month, the vessel may remain.

(*c.*) In cases, however, where a vesssel hauled up for repairs upon the canal bank remains there throughout the winter, a charge of four dollars only shall be made (in addition to the ordinary winterage dues), the period covered being from the 1st of November to the 1st of June, inclusive.

(*d.*) Any vessel remaining on the canal bank after having wintered thereon shall be charged at the rate of one dollar a month or fraction of a month of her subsequent stay.

(*e.*) Any vessel remaining more than one year on the bank of the canal shall for such time as she may remain in excess of that period pay at the rate of two dollars a month or fraction of a month throughout the whole year.

(*f.*) All charges shall be payable at the collector's office in advance on the first day of each month.

(*g.*) These rules shall be understood as applying to all cases where the canal bank is used in any manner for the repairs of vessels, whether such vessels are actually hauled up or not. O. C. August 6, 1881. Con. O. C. Oct. 26, 1889, sec. 107.

DRY DOCK CHARGES.

Trent Valley Canal.

Sec. **38.** The following tolls and dues shall be charged for the use of the dry dock at Bobcaygeon, and of any of the locks on the Trent Valley Canal, during the winter or other shorter period:—

For Vessels	Wintering.	Per day.	Per week.
Over 15 tons	$30 00	$4 00	$12 00
15 tons and under.	20 00	3 00	10 00

(O. C. Oct. 31, 1890.)

Rideau Canal.

Sec. **39.** The following tariff of tolls and regulations shall be, and the same are hereby established for the use of the dry dock on the Rideau Canal at Ottawa:—

(1) Steamers entering dock	$ 8 00
Each day or portion of a day after day of entrance	2 50
(2) Barges entering dock	5 00
Each day or portion of a day after day of entrance	2 50
(3) Steam yachts or launches	5 00
Each day or portion of a day after day of entrance	2 50
(4) Boats wintering in the dry dock from the close to the opening of navigation	50 00
For every day such boat remains in the dock after the opening of navigation	8 00

(5) No vessel of any class shall be in the dock over six days after notice is given in writing by the lockmaster that the dock is required for another vessel unless a satisfactory agreement between all parties interested is arrived at.

(6) All entrances and discharge of vessels are covered by entrance fee.

(7) All drying off of vessels of all classes in the locks at Ottawa or Hartwell's during the season of navigation is prohibited unless for special reasons.

The owners of vessels of all classes to render the required assistance to open and close the gate under the supervision of the superintending engineer.

Vessel owners to supply all blocks, &c., to shove their boats up to make the necessary repairs and all refuse to be properly cleared out to the entire satisfaction of the lockmaster before leaving the dock.

(O. C. Dec. 28, 1893.)

Sec. **40.** The use of horses for towage purposes between the lower entrance of the Cornwall Canal and lock No. 20, be prohibited during the works of enlargement of that portion of the Cornwall Canal.

(O.C. Aug. 20, 1890.)

Sec. **41.** As the prohibition of the use of horses for towing purposes, between the lower entrance of the Cornwall Canal and Lock No. 20 during the progress of the works of canal enlargement, has entailed the use of tugs and consequently expenses to the parties concerned, that all tugs, used solely for the purposes of towing on the section in question, be permitted to pass free of toll, up and down the canal between the lower entrance of the canal and lock No. 20, until the completion of the enlargement of the works on that section. (O. C. Sept. 27, 1890.)

SPECIAL RATES FOR 1902 ONLY.—1903. Free.

Sec. **42.** For season of 1902 the Canal Tolls for the passage of the following food products:—wheat, Indian corn, pease, barley, rye, oats, flax seed and buckwheat, for through passage eastward through the Welland Canal, be ten cents per ton, and for through passage eastward through the St. Lawrence Canals only, ten cents per ton; payment of the said toll of ten cents per ton through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals, or any portion thereof. (O. C. April 1, 1902.) Also special rates, are granted to grain, &c., carried on the O. A. & P. S. and Canada Atlantic Railway systems, from Depot Harbour to Coteau Landing and thence by Canal to Montreal, as follows, viz.:—Wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, 2½ cents per ton, and all rolling and package freight, 5 cents per ton. (O. C. April 1, 1902.) Free, O.C., April 27, 1903.

Sec. **43.** *(a.)* That for the current season of navigation of 1902, there shall be allowed in the case of steamships specially chartered for the conveyance of excursion parties, going and coming the same day, a reduction of one-half of the usual passenger tolls for passage through the Government canals, it being distinctly understood that no freight is to be carried by the said steamers on such excursions. (O. C. April 25, 1902.) Free, O.C., April 27, 1903.

Sec. **43.** *(b.)* Whereas the Canal Tolls payable for passage through the Welland and St. Lawrence Canals of barrel staves and headings, are 40 cents per 1,000 in the case of ordinary materials, such as those for sugar and flour barrels; while in the case of staves and headings for salt barrels the charge is 8 cents per 1,000 only.

And whereas application is made to have this distinction removed on the ground that sugar and flour cooperage is of the same weight as salt cooperage.

His Excellency in virtue of the provisions of chapter 38 of the Revised Statutes of Canada, intituled "An Act respecting the Department of Railways and Canals," and by and with the advice of the Queen's Privy Council for Canada, is pleased to order that Class 5 of the existing Tariff of tolls for passage through the Canals of the Dominion, established by the Order in Council of the 25th March, 1895, shall be and the same is hereby amended to the effect, and to that effect only, of removing the distinction between ordinary and salt barrel staves and headings, and making the tolls payable for these articles the same, namely, those at present charged on salt barrel staves and headings, on all the Canals of the Dominion. (O. C. May 28, 1897.)

SPECIAL RATES ON SAND AND STONE.

Sec. 13. *(c.)* On the recommendation of the Acting Minister of Railways and Canals, the rate of tolls on sand and stone used in the construction of the bridge being built at Cornwall by the Ottawa and New York Railway was reduced from 15 and 20 cents to 7½ and 10 cents respectively. (O. C. August 27, 1898.)

APPENDIX B

DOMINION CANALS

The canal systems of the Dominion, under government control in connection with lakes and navigable rivers, are as follows :—

First.—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)

	Miles.
1. Lachine Canal	8½
Lake St. Louis and River St. Lawrence	16
2. Soulanges Canal	14
Lake St. Francis and River St. Lawrence	33
3. Cornwall Canal	11
River St. Lawrence	5
4. Farran's Point Canal	1
River St. Lawrence	10
5. Rapide Plat Canal	3½
River St. Lawrence	4
6. Galops Canal	7¼
River St. Lawrence and Lake Ontario	236
7. Welland Canal	26¾
Lake Erie, Detroit River, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie Canal	1¼
Lake Superior to Port Arthur	266
Total	1,223¼
To Duluth	1,357
Chicago	1,286

Second.—Ottawa to Lake Champlain.

1. Grenville. 2. Carillon. 3. St. Anne's. 4. Chambly. 5. St. Ours Canals.

Third.—Ottawa to Kingston and Perth.

1. Rideau Canal.

Fourth.—Lake Ontario at Trenton to Lake Huron at mouth of River Severn.

1. Trent Canal (not completed).

Fifth.—Ocean to the Bras d'Or Lakes.

1. St. Peter's Canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,200 statute miles. The distance to Duluth is 2,343 statute miles. The distance to Chicago, 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

Navigation, which is closed by ice during the winter months, opens about the end of April.

Montreal has by this work been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the great lakes and the Sault Ste. Marie canal, to the head of Lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and Lake Superior, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canal, situated on the United States side of the River St. Mary. Both these canals are free of toll.

It is important to note that the enlargement of the canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: Length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of the vessels to be accommodated is limited to 255 feet. At Farran's, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

LACHINE CANAL.

Length of canal	8½ statute miles.
Number of locks	5
Dimension of locks	270 feet by 45 feet.
Total rise or lockage	45 feet.
Depth of water on sills, at two locks	18 "
Depth of water on sills, at three locks	14 "
Average width of new canal	150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bars the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle Isle.

SOULANGES CANAL.

Length of canal	14 statute miles.
Number of locks { lift	4
Number of locks { guard	1
Dimensions of locks	280 feet by 45 feet.
Total rise or lockage	84 feet.
Depth of water on sills	15 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "
Number of arc lights	219 of 2,000 c. p. each.

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascade Rapids, Cedar Rapids and Coteau Rapids.

From the head of the Lachine to the foot of the Soulanges, the distance is sixteen miles.

CORNWALL CANAL.

Length of canal	11 statute miles.
Number of locks	6
Dimensions of locks	270 feet by 45 feet.
Total rise or lockage	48 feet.
Depth of water on sills	14 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "

The old lift locks, 200 feet by 45 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall Canal there is a stretch through Lake St. Francis, of $32\frac{3}{4}$ miles, which is being made navigable for vessels drawing fourteen feet.

The Cornwall Canal extends past the Long Sault Rapids from the town of Cornwall to Dickinson's Landing.

WILLIAMSBURG CANALS.

The Farran's Point, Rapide Plat and Galops canals are collectively known as the Williamsburg Canals.

FARRAN'S POINT CANAL.

Length of canal	1 mile.
Number of locks	1
New lock	800 feet by 45 feet.
Old lock	200 "
Total rise or lockages	$3\frac{1}{2}$ feet.
Depth of water on sills of new lock	14 "
Depth of water on sills of old lock	9 "
Breadth of canal at bottom	90 "
Breadth of canal at water surface	154 "

From the head of the Cornwall canal to the foot of Farran's Point canal, the distance on the River St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farran's Point Rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

RAPIDE PLAT CANAL.

Length of canal	$3\frac{2}{3}$ miles.
Number of locks	2
Dimensions of locks	270 feet by 45 feet.
Total rise or lockage	$11\frac{1}{2}$ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	152 "

The old lift lock, 200 feet by 45, is also available, with nine feet of water on mitre sills.

From the head of Farran's Point canal to the foot of Rapide Plat canal, there is a navigable stretch of $10\frac{1}{2}$ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place Descending vessels run the rapids safely.

GALOPS CANAL.

Length of canal	$7\frac{1}{3}$ miles.
Number of locks	3
Dimensions of locks, { one of which is a guard lock. }	2–270 by 45. 1–800 by 45.
Total rise of lockage	$15\frac{1}{2}$ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable $4\frac{1}{2}$ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western pier heads.	$5\frac{1}{6}$ miles.
Breadth at bottom	80 feet.
Breadth at water surface	120 "
Depth below lowest known lake level	11 "
No locks.	

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinté and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old Line.	Enlarged or New Line.
Length of canal	$27\frac{1}{2}$ miles	$26\frac{3}{4}$ miles.
Pairs of guard-gates (formely 3)		2
Number of locks, lift	26	25
Number of locks, guard	1	1
Dimensions	1 lock 200 x 45 1 lock 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 45	270 feet x 45 feet.
Total rise or lockage $326\frac{3}{4}$ feet	$326\frac{3}{4}$ feet	$326\frac{3}{4}$ feet.
Dept of water on sills	$10\frac{1}{4}$ "	14

WELLAND RIVER BRANCHES.

Length of canal—	
Port Robinson Cut to River Welland	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct	300 "
Chippewa Cut to River Niagara	1,020 "
Number of locks—one at Aqueduct and one at Port Robinson	2
Dimensions of locks	150 by 26½ feet.
Total lockage from the canal at Welland down to River Welland	10 feet.
Depth of water on sills	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal	21 miles,
Number of locks	2
Dimensions of locks	1 of 150 by 26½ feet. 1 of 200 by 45 "
Total rise or lockage	7 to 8 feet.
Depth of water on sills	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1¾ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Total rise of lockage	7½ feet.
Depth of water on sills	11 "

The Welland canal has two entrances from Lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburg, 11¾ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit River, Lake St. Clair, the St. Clair River, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL,

Length of canal, between the extreme ends of the entrance piers	5,967 feet.
Number of locks	1
Dimensions of locks	900 ft. by 60 ft.
Depth of water on sills (at lowest known water level)	20 ft. 3 inches.
Total rise or lockage	18 feet.
Breath of canal at bottom	141 ft. 8 inches.
Breadth at surface of water	150 feet.

This canal has been constructed through St. Mary's Island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian

territory between Lakes Huron and Superior. The masonry pier of the bridge carrying the Canadian Pacific Railway over the canal, which stood in the channel of the canal, forming an obstruction to navigation, has been removed; the swing now spanning the full width of the channel or prism of the canal.

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the River Rideau and the Rideau canal to Kingston, on lake Ontario—a total distance of 245⅝ miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:

Ottawa River Canals.

The Ste. Anne's Lock.	Grenville Canal.
Carillon Canal.	Rideau Canal.

The total lockage (not including that of the Lachine canal) is 509 feet—(345 rise 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Intermediate Distance.	Total Distance, from Montreal.
	Miles.	Miles.
The Lachine Canal	8½	
From Lachine to Ste. Anne's lock	15	23
Ste. Anne's lock and piers	⅛	23
Ste. Anne's lock to Carillon canal	27	50
The Carillon canal	¾	51
The Carillon to Grenville Canal	6¼	57
The Grenville canal	¾	63
From the Grenville canal to entrance of Rideau navigation	56	119
Rideau navigation ending at Kingston	126¼	245

STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Length of canal	⅛ mile.	⅛ mile.
Number of locks	1	1
Dimensions of locks	190 x 45 feet	200 x 45 feet.
Total rise or lockage	3 feet.	3 feet.
Depth of water on sills	6 "	9 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23½ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal	$\frac{3}{4}$ mile.
Number of locks	2
Dimensions of locks	200 x 45 feet.
Total rise or lockage	16 feet.
Depth of water on sills	9 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	110 "

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal there is navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Length of canal	$5\frac{3}{4}$ miles.
Number of locks	5
Dimensions of locks	200 x 45 feet.
Total rise or lockage	$43\frac{3}{4}$ feet.
Depth of water on sills	9 "
Breadth of canal at bottom	40 to 50 feet.
Breadth of canal at surface of water	50 to 80 feet.

This canal, by which the Long Sault Rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters	$126\frac{1}{4}$ miles.
Number of locks going from Ottawa to Kingston	35 ascending. 14 descending.
Total, lockage $446\frac{1}{2}$ feet	$282\frac{1}{4}$ rise and 164 fall at high water.
Dimensions of locks	134 x 33 feet.
Depth of water on sills	5 feet.
Navigation depth through the several reaches	$4\frac{1}{2}$ feet.
Breadth of canal reaches at bottom.	60 feet in earth. 54 feet in rock.
Breadth of canal at surface of water	80 feet in earth.

PERTH BRANCH.

Length of canal	6 miles.
Number of locks	2
Dimensions of locks	134 feet x 32 feet.
Total rise or lockage	26 "
Depth of water on sills	5 " 6 inches.
Length of dam	200 "
Breadth of canal at bottom	40 "
Breadth of canal at surface at water	40 " in rock. 60 " in clay.

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on Lake Rideau, and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply :—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz :—

1. The summit level, supplied by the Wolfe lake system.

2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.

3. The south-west descending level to Kingston, supplied by the Mud lake system formerly known as the Devil lake system, discharging into Lake Openicon.

Lake Openicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin of Chambly; thence, by the Chambly canal, to St. Johns, and up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distances between Sorel and New York :—

Section of Navigation.	Intermediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours lock	14	14
St. Ours Lock to Chambly Canal	32	46
Chambly canal	12	58
Chambly canal to boundary line	23	81
Boundary line to Champlain canal	111	192
Champlain canal to junction with Erie canal	66	258
Erie Canal, from junction to Albany	7	265
Albany to New York	146	411

ST. OURS LOCK DAM.

Length	$\frac{1}{8}$ mile.
Number of locks	1 "
Dimensions of lock	200 feet by 45 feet.
Total rise of lockage	5 "
Depth of water on sills	7 feet at low water.
Length of dam in eastern channel	300 "
Length of dam in western channel	690 "

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 32 miles.

CHAMBLY CANAL.

Length of canal	12 miles.
Number of locks	9

Dimensions of locks :—

Guard lock, No. 1 at St. Johns	122 feet.		
Lift " 2	124 "	From 22½ to 24 feet wide.	
" " 3, 4, 5, 6	118 "		
" " 7, 8, 9 combined	125 "		
Total rise or lockage	74 "		
Depth of water on sills	7 "		
Breadth of canal at bottom	36 "		
Breadth of canal at surface of water	60 "		

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

TRENT CANAL.

The term 'Trent canal' is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in their present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows :—

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 165 miles from Trenton ; from Lake Balsam by a canal and the River Talbot to Lake Simcoe ; thence by the River Severn to Georgian bay, Lake Huron ; the total distance being about 200 miles, of which only about 15 or 20 miles will be actual canal

The full execution of the scheme, commenced by the Imperial government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog to Port Perry, a distance of 190 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches :—

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté to Nine Mile rapids.	—	9
Nine Mile rapids to Percy landing	19½	—
Percy landing to Heeley's Falls dam	—	14½
Heeley's Falls dam to Peterborough	51¾	—
Peterborough to Lakefield	—	9
Lakefield to a point across Balsam lake	61	—
	132¼	32¾
Total distance, Bay of Quinté to a point across Balsam lake		165
From Sturgeon Point on Sturgeon lake, 48¾ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog		27

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Young Point, Burleigh Rapids, Lovesick, Buckhorn Rapids, Bobcaygeon, Fenelon Falls and Rosedale ; also dams at Lakefield, Young's Point, Burleigh Falls, Lovesick, Buckhorn, Bobcaygeon and Fenelon Falls. By these works there is afforded communication between Lakefield, 9½ miles from Peterborough, and Balsam lake, the headwaters of the system : opening up a total of about 160 miles of direct and lateral navigation.

At Lakefield, 9½ miles from Peterborough, the dam at the head of the Nine Mile rapids of the River Otonabee, maintains navigation on Lake Katchewannoe up to Young's Point.

At Young's Point, 5 miles from Lakefield, the dam between Lake Katchewannoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal. The lock here, it should be observed, is controlled by the Provincial government.

At Burleigh Rapids, 10 miles from Young's Point, a canal, about 2¼ miles in length, passes the Burleigh and Lovesick rapids, and gives communication between Stony lake and Deer bay.

At Buckhorn rapids, 7 miles from Burleigh Rapids, there is a canal about one-fourth of a mile long.

At Bobcaygeon, 15¾ miles from Buckhorn Rapids, a dam, 553 feet long, controls the water level up to Fenelon Falls.

At Fenelon Falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length connects Sturgeon lake with Cameron lake.

The following is a list of the locks with their dimensions :—

1	Lock at Rosedale, (maintained by the Ontario government)	100′ x 30′ x 4′ 6′ to 6′ 6″ depth water on mitre sill.
2	Locks at Fenelon	134′ x 33′ x 5′ 0″ to 7′ 6″ depth water on mitre sill.
1	" Lindsay	134′ x 33′ x 5′ 0″ to 7′ 6″ " "
1	" Bobcaygeon	134′ x 33′ x 5′ 8″ to 7′ 0″ " "
1	" Buckhorn	134′ x 33′ x 5′ 0″ to 9′ 0″ " "
1	" Lovesick	134′ x 33′ x 5′ 0″ to 9′ 4″ " "
2	" Burleigh	134′ x 33′ x 6′ 0″ to 8′ 0″ " "
1	" Young's Point (a Provincial government work)	134′ x 33′ x 5′ 0″ to 14′ 0″ depth water on mitre sill.
1	" Peterborough	134′ x 33′ x 5′ 0″ to 10′ 0″ depth water on mitre sill.
1	" Hastings	134′ x 33′ x 7′ 0″ to 10′ 6″ " "
1	" Chisholm's	134′ x 33′ x 5′ 0″ to 8′ 6″ " "
13		

ST. PETER'S CANAL, CAPE BRETON.

Length of canal	About 2,400 feet.
Breadth at water line	55 feet.
Lock	One tidal lock, 4 pairs of gates.
Dimensions	200 feet by 48 feet.
Depth of water on sills	18 " at lowest water.
Depth through canal	19 "
Extreme rise and fall of tide in St. Peter's Bay	4 "

This canal connects St. Peter's bay on the northern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

BEAUHARNOIS CANAL.

Length of canal	12 statute miles.
Number of locks	9.
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	82½ "
Depth of water on sills	9 "
Breadth of canal at bottom	80 "
Breadth of canal at water surface	120 "

As the new Soulanges canal is now opened for navigation, it is to be presumed that the Beauharnois canal will be abandoned for navigation purposes.

SESSIONAL PAPER No. 20

ST. LAWRENCE NAVIGATION—TABLE OF DISTANCES.

FROM STRAITS OF BELLE-ILE TO PORT ARTHUR, AT HEAD OF LAKE SUPERIOR, BY WATER.

From	To	Sections of Navigation.	Statute Miles. Intermediate.	Total to Straits of Belle-Isle.
Straits of Belle-Ile	Cape Whittle	Gulf of St. Lawrence	240	240
Cape Whittle	West Point, Anticosti	"	201	441
West Point, Anticosti	Father Point	River St. Lawrence	202	643
Father Point	Rimouski	"	6	649
Rimouski	Bic	"	12	661
Bic	Isle Verte	"	39	700
Isle Verte (opp. Saguenay)	Quebec	"	126	826
Quebec	Three Rivers	" to Tide-water	74	900
Three Rivers	Montreal	"	86	986
Montreal	Lachine	Lachine Canal	8½	994½
Lachine	Beauharnois	Lake St. Louis	15¼	1,009¾
Beauharnois	Ste. Cécile	Beauharnois Canal	11¼	1,021
Ste. Cécile	Cornwall	Lake St. Louis	32¾	1,053¾
Cornwall	Dickinson's Landing	Cornwall Canal	11½	1,065¼
Dickinson's Landing	Farran's Point	River St. Lawrence	5	1,070¼
Farran's Point	Upper end of Croyle's Island	Farran's Point	¾	1,071
Upper end Croyle's Island	Williamsburg or Morrisburg	River St. Lawrence	10½	1,081½
Williamsburg	Rapide Plat	Rapide Plat Canal	4	1,085½
Rapide Plat	Point Iroquois Village	River St. Lawrence	4⅓	1,090
Point Iroquois Village	Upper end Presqu'Ile	Point Iroquois Canal	3	1,093
Presqu'Ile	Point Cardinal, Edwardsburg	Junction Canal	2⅝	1,095⅝
Point Cardinal	Head of Galops Rapids	Galops Canal	2	1,097⅝
Galops Rapids	Prescott	River St. Lawrence	7⅜	1,105
Prescott	Kingston	"	59	1,164
Kingston	Port Dalhousie	Lake Ontario	170	1,334
Port Dalhousie	Port Colborne	Welland Canal	26¾	1,360¾
Port Colborne	Amherstburg	Lake Erie	232	1,592⅝
Amherstburg	Windsor	River Detroit	18	1,610¾
Windsor	Foot of St. Mary's Island	Lake St. Clair	25	1,635¾
Foot of St. Mary's Island	Sarnia	River St. Clair	33	1,668⅞
Sarnia	Foot of St. Joseph's Island	Lake Huron	270	1,938⅞
Foot of St. Joseph's Island	Foot of Sault Ste. Marie	River St. Mary	47	1,985⅞
Sault Ste. Marie	Head of Sault Ste. Marie	Sault Ste. Marie Canal	1	1,986¾
Head of Sault Ste. Marie	Pointe aux Pins	River St. Mary	7	1,993¾
Pointe aux Pins	Port Arthur	Lake Superior	266	2,259¾
Port Arthur to Lake Shebandowan			45	
Lake Shebandowan to North-west Angle			312	
North-west Angle to Winnipeg			95	
Pointe aux Pins to Duluth			390	

Of the 2,259¾ miles from the Straits of Belle-Ile to the head of Lake Superior, 71 miles are artificial navigation, and 2,188¾ open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical or 2,234 statute miles.

The total fall from Lake Superior to Tide-water is about 600 feet.

The steamboat voyage from Collingwood to Port Arthur is 532 miles.

TABLE of distances of Stations between the cities of Ottawa and Kingston,

No. of Station.	Name of Station.	Distances from Ottawa.	Locks.		Dams.			Length of Artificial Canal at each Station in miles.
			No.	Lift at Low Water.	No.	Length.	Height.	
		Miles.		Rise. Ft. In.		Feet.	Feet.	
1	Ottawa	0	8	82 0	3	230 1,320 1,616	13 33 14	
2	Hartwell's	4¼	2	22 0	...	100	28	4·00
3	Hogsback	5½	2	13 6	1	320	60	
4	Black Rapids	9½	1	10 0	1	300	12	0·13
5	Long Island	14¾	3	27 0	3	850	68	0·13
6	Burritt's	40½	1	10 6	1	240	14	1·50
7	Nicholson	43¾	2	15 2	1	500	9	0·50
8	Clowes	44½	1	10 0	1	481	16	0·05
9	Merrickville	46¾	3	25 0	1	150	6	0·33
10	Maitland	55	1	4 9	1	270	8	0·13
11	Edmunds	59½	1	10 10	1	343	8	0·06
12	Old Slys	60½	2	15 6	1	250	20	0·25
13	Smith's Falls	61½	4	33 9	2	600	24	0·13
14	First Rapids or Poonamalie	64	1	7 9	1	260	5	1·25
15	Narrows	83¼	1	4 0	1	600	9	0·06
	Total rise at low water	...	...	292 3				
				Fall.				
16	Isthmus	87½	1	4 0	...	...	...	1·25
17	Chaffey's	92	1	12 6	...	...	...	0·13
18	Davis	94½	1	9 0	1	300	15	0·06
19	Jones' Falls	97¾	4	60 0	1	300	60	0·25
20	Brewer's Upper Mills	108¼	2	19 0	1	200	20	1·75
21	" Lower Mills	110	1	14 2	1	200	12	4·25
22	Kingston Mills	120½	4	46 8	1	6,042	14	0·25
23	Kingston	126¼	...	...	...	...	...	...
	Total fall at low water	...	...	165 4	...	...	...	...
	Total	...	47	...	24	15,472	...	16·46

PART VI

STEAM AND ELECTRIC RAILWAY STATISTICS

STEAM RAILWAY STATISTICS

OF THE

DOMINION OF CANADA

FOR THE YEAR ENDED JUNE 30, 1904.

Compiled by Mr. Thomas Ridout, C.E., from sworn Returns furnished by the several Railway Companies

COLLINGWOOD SCHREIBER,
Deputy Minister and Chief Engineer of Railways and Canals.

TABLE showing the growth of the Railways from year to year, since the opening of the first line in 1836.

Year,	Miles in Operation.	Year.	Miles in Operation.
1835	0	1870	2,617
1836	16	1871	2,695
1837	16	1872	2,899
1838	16	1873	3,832
1839	16	1874	4,331
1840	16	1875	4,804
1841	16	1876	5,218
1842	16	1877	5,782
1843	16	1878	6,226
1844	16	1879	6,858
1845	16	1880	7,194
1846	16	1881	7,331
1847	54	1882	8,697
1848	54	1883	9,577
1849	54	1884	10,273
1850	66	1885	10,773
1851	159	1886	11,793
1852	205	1887	12,184
1853	506	1888	12,585
1854	764	1889	12,585
1855	877	1890	13,151
1856	1,414	1891	13,838
1857	1,444	1892	14,564
1858	1,863	1893	15,005
1859	1,994	1894	15,627
1860	2,065	1895	15,977
1861	2,146	1896	16,270
1862	2,189	1897	16,550
1863	2,189	1898	16,870
1864	2,189	1899	17,250
1865	2,240	1900	17,657
1866	2,278	1901	18,140
1867	2,278	1902	18,714
1868	2,270	1903	18,988
1869	2,524	1904	19,431

DEPARTMENT OF RAILWAYS AND CANALS.

THE SUMMARY of Tables of Steam Railways for the Years ended June 30, 1903, and June 30, 1904.

	Comparative Statement.	
	June 30, 1903.	June 30, 1904.
Miles of railway completed (track laid)	19,077	19,611
" sidings	2,953	3,327
" iron rails in main line	101	66
" steel	18,976	19,545
" " (double track)	695	763
Capital paid (including the four following items)	1,146,550,769	1,186,546,918
Government (Dominion and Provincial) bonuses paid	189,874,202	195,805,982
" " " loans paid	20,613,214	20,613,214
" (Provincial only) subscriptions to shares paid	300,000	300,000
Municipal aid paid	16,551,044	17,157,810
Miles in operation	18,988	19,431
Gross earnings	96,064,527	100,219,436
Working expenses	67,481,524	74,563,162
Net earnings	28,583,003	25,656,274
Passengers carried	22,148,742	23,640,765
Freight carried (tons)	47,373,417	48,097,519
Train mileage	60,382,920	61,312,002
Passengers killed	53	25
Number of elevators	261	286
" Highway crossings at rail-level, with watchman	221	239
" " " without watchman	12,829	13,493
" Overhead bridges, highway crossings over railway	468	463
" Highway crossings under railway	299	333
" Level crossings of other railways	256	272
" Junctions with other railways	374	381
" " branch lines	223	224
" Engines owned	2,488	2,640
" " hired	99	128
" Sleeping cars owned	†	156
" " hired	†	15
" Parlor cars owned	290	44
" " hired	14	6
" Dining cars owned	†	37
" " hired	†	5
" Official cars owned	†	60
" " hired	†	
" First-class passenger cars owned	1,106	1,153
" " " hired	42	78
" Second-class and immigrant cars owned	579	583
" " " hired	11	12
" Baggage, mail and express cars owned	796	839
" " " hired	22	21
" Refrigerator cars owned	979	1,297
" " hired	242	268
" Cattle and box freight cars owned	49,652	51,951
" " " hired	3,455	2,926
" Platform cars owned	17,784	18,254
" " hired	501	390
" Coal cars owned	7,356	8,172
" " hired	283	304
" Conductors vans owned	1,107	1,229
" " hired	19	19
" Tool cars owned	‡ 1,070	823
" " hired	4	5
" Snow ploughs owned	308	300
" " hired	5	4
" Flanges owned	345	354
" " hired	2	2
" Other rolling stock		* 1,421
Included in the above there are the following:		
Number of cars with air brakes owned	63,788	71,795
" " " hired	4,348	3,478
" " automatic couplers owned	71,964	76,816
" " hired	4,572	3,769

† Sleeping, parlor, dining and official cars in total.

‡ Including water tank cars, steam-shovels, pile-drivers, store cars, gravel cars, boarding cars, &c.

*Steam cranes, steam-shovels, derricks, boarding cars, pile drivers, &c.

Nominal capital paid up to June 30, 1904.

	Miles constructed.	Amount.	Per mile.	Remarks.
		$ cts.	$ cts	
Ordinary share capital	19,611	347,158,117 42	17,702 21	
Preference "	19,611	145,594,412 28	7,422 33	
Bonded debt	19,611	449,114,035 34	22,901 13	
Aid from Dominion Government	19,611	182,222,277 86	9,291 84	
" Ontario "	7,220	8,512,578 04	1,179 02	
" Quebec "	3,510	16,613,242 16	4,733 11	
" New Brunswick Government	1,460	4,569,937 71	3,130 09	Equal to an average of $1,759.06 per mile on the total mileage.
" Nova Scotia "	1,104	2,846,707 18	2,578 53	
" Prince Edward Island Government	209			
" Manitoba Government	2,364	1,916,952 75	810 89	
" British Columbia Government	1,544	37,500 00	24 28	
" North-west Territories "	2,200			
" Municipalities in Ontario	7,220	12,862,197 80	1,781 46	
" " Quebec	3,510	3,125,727 17	890 52	
" " New Brunswick	1,460	336,500 00	230 48	Equal to an average of $874.90 per mile on the total mileage.
" " Nova Scotia	1,104	283,023 93	256 36	
" " Prince Edward Island	209			
" " Manitoba	2,364	490,600 00	207 11	
" " British Columbia	1,544	37,500 00	24 28	
" " North-west Territ.	2,200	22,261 29	10 12	
Capital from other sources	19,611	10,838,347 36	552 66	
Total capital paid	19,611	1,186,546,918 29		

Government and Municipal Loans, Bonuses, &c., premised to Railways Completed and under Construction up to June 30, 1904.

	$ cts.
Dominion Government	188,397,314 39
Ontario "	8,922,378 04
Quebec "	17,569,089 08
New Brunswick Government	4,863,012 71
Nova Scotia "	3,965,087 45
Manitoba "	1,916,952 75
British Columbia "	37,500 00
Municipalities in Ontario	12,947,197 80
" Quebec	4,875,074 00
" New Brunswick	341,500 00
" Nova Scotia	333,023 93
" Manitoba	595,600 00
" British Columbia	37,500 00
North-west Territories	25,000 00
Total	243,926,230 15

Land Grants made by Governments to Railways

No.	Act authorizing Subsidy.	Name of Railway Company.	Government.
1	48-49 Vic., c. 60; 50-51 Vic., c. 22; 52 Vic., c. 2.	Alberta Railway and Coal Co.—Main line, Dunmore to Lethbridge	Dominion
2	52 Vic., c. 4; 52 Vic., c. 3.	Alberta Railway and Coal Co. from Lethbridge to International Boundary	"
3	53 Vic., c. 4.	Calgary and Edmonton Railway	"
4	44 Vic., c. 1.	Canadian Pacific Railway—Main line	"
5	53 Vic., c. 4.	C. P. R.—Deloraine and Napinka Branch	"
6	53 Vic., c. 4.	C. P. R.—Glenboro' and Souris Branch	"
7	53 Vic., c. 4; 54 Vic., c. 10.	C. P. R.—Kemnay and Estevan Branch	"
8	57-58 Vic., c. 6	C. P. R.—Pipestone Branch	"
9	62-63 Vic., c. 57.	‡Canadian Northern Railway	"
10	49 Vic., c. 11.	Great North-west Central Railway	"
11	48-49 Vic., c. 60.	Manitoba and North-western Railway—Main line	"
12	49 Vic., c. 11.	" " Russel Branch	"
13	57-58 Vic., c. 6.	Saskatchewan and Western Railway	"
14	53 Vic., c. 4	Manitoba and South-eastern Railway	"
15	54-55 Vic., c. 10; 48-49 Vic., c. 10.	Manitoba and South-western Colonization Railway	"
16	48-49 Vic., c. 60; 50-51 Vic., c. 23.	Qu'Appelle, Long Lake and Saskatchewan Railway	"
17			Ontario
18	63 Vic., c. 30.	Algoma Central and Hudson Bay Railway	"
19		Quebec and Lake St. John Railway	Quebec
		" " "	"
20		Yarmouth and Annapolis—in Dominion Atlantic Railway	Nova Scotia
21		Columbia and Kootenay Railway	British Columbia
22		Columbia and Western Railway	"
23		Esquimalt and Nanaimo Railway	"
24		Kaslo and Slocan Railway	"
25		Nelson and Fort Sheppard	"
26	57 Vic., c. 39.	British Columbia Southern	"

* Again, after efforts to obtain a statement of the amounts realized from the sale of these lands, the to the Dominion Government at $1.50 per acre. ‡ By 62-63 Vic., caps 57, 75 and 80, the Lake Manitoba the Ontario and Rainy River Ry., were amalgamated with the Canadian Northern Ry., all the rights of have been retained by government as security for cash subsidy.

completed and under construction, up to June 30, 1904.

Mileage Subsidized.	Acres granted per Mile.	Total Acres granted.	Acres sold by Railway Companies.	Amount Realized.	
				$ cts.	
109·50	6,400	700,800			
			1,903,607	2,575,473 61	Sold 790,039 acres more than the Dominion Government grant.
64·62	6,400	413,568			
294·07	6,400	1,888,448	*1,481,046	*	
.....	.....	25,000,000	†6,793,014	10,189,521 00	
18·01	6,400	115,264			
45·24	6,400	289,536	9,123,273	32,310,815 70	
156·86	6,400	1,003,904			
31 30	6,400	200,320			
818·61	Div. A., 6,400 " B., 12,800 " C., 6,400	8,580,928	356,689	1,361,768 34	
			Acres sold.	Amount.	
50·00	6,400	320,000	175,150	711,885 40	
			Town sites.	6,322 70	
223·09	6,400	2,918,400	1,187,487	1,950,522 10	
11·50	6,400				
15·45	6,400	98,880			
98·00	6,400	627,200	.....	.....	In Canadian Northern.
218 25	6,400	1,396,800	997,416	3,604,473 52	
			Town sites.	290,746 19	
253·96	6,400	1,625,344	128,000	121,600 00	
			998,200	**	Disposed of, to enable the company to finance.
.....	.....	.....	.....	.....	
200·00	7,400	1,480,000	None.	Nil.	
.....	.....	.....	1,390,000	729,750 00	
.....	.....	.....	450,000	100,000 00	
.....	.....	150,000	No return	of lands sold.	
.....	.....	190,000	40,673	109,293 07	Leased to Can. Pac. Ry.
			Town sites.	246,436 38	
.....	.....	2,500,000	No return	of lands sold.	Leased to Can. Pac. Ry.
.....	.....	2,000,000	345,551	1,304,561 70	
			Town and Suburban lots ...	108,961 48	
			Miners Houses and lots.	57,765 00	
.....	.....	212,763	Town sites.	8,392 33	
			132,604	50,736 00	
.....	.....	608,256	435,521	433,826 87	
187·79	20,000	3,600,000	5,002	21,564 48	

companies have failed to give the information, the return, therefore, in this respect, is incomplete. †Sold Railway and Canal Co., the Winnipeg Great Northern Ry., the Manitoba and South-eastern Ry., and these companies being vested in the new company. **Qu'Appelle, &c. Ry. The remaining 449,114 acres

STEAM RAILWAYS.

Total Fatal Accidents for Year ended June 30, 1904.

	Passengers Killed.	Employees Killed	Others Killed.	Total Killed.
Falling from cars or engines	5	34	8	47
Jumping on or off trains in motion	7	7	7	21
At work making up trains		3		3
Putting heads or arms out of window				
Coupling cars		11		11
Collisions, or by trains thrown from track	8	60	9	77
Struck by engines or cars on highway crossings		1	36	37
Walking, standing, lying, sitting or being on track	5	41	103	149
Explosions				
Striking bridges		2		2
Other causes		33	15	48
Total killed	25	192	178	395

TABLE showing Location of the Steam Railways of the Dominion of Canada, June 30, 1904.

Name of Railway.	Description.	Distance. Miles.	Total.
Alberta Railway and Coal Co....	From Lethbridge in District of Alberta, N.W.T., to Coutts, on International boundary, 4 ft. 8½ in. gauge. Also third rail for 20 miles, making a gauge of 5' 0". The portion from Dunmore to Lethbridge, 107 miles, was changed to 4 ft. 8½-in. gauge and sold to Can. Pac. Ry., 29th Nov., 1893.	.....	66·72
Albert Southern.	Harvey Branch Junction to Alma, N.B..	16·00	
	Harvey Branch Albert to Harvey Bank, N.B....	3·00	
		———	19·00
Algoma Central and Hudson Bay.	Sault Ste. Marie to mile 64¼—Main line.....	64·25	
	Branch—Michipicoten to Helen Mines..... ...	12·00	
	" Josephine Jct. to Josephine Mine... ...	10·50	
	Trout Lake to Aweres	2·00	
	Mile 20 to Maple Camp	1·00	
	Lake Wilde to Breiting Mine.....	2·00	
Baie des Chaleurs in Atlantic and Lake Superior System....	Metapedia Station on C.P.R. to Paspebiac, 100 miles	———	91·75 100·00
Bay of Quinté Railway....	Deseronto to Bannockburn.....	76·00	
	" west of Deseronto.....	2·00	
	" Deseronto Junction.	4·00	
	Yarker to Sydenham	11·37	
		———	93·37
Bedlington and Nelson.....	International Boundary at Port Hill to Jct. Can. Pac. Ry. at Creston, and from Junct. with C.P.R. at Sirdar to Kuscomok..	.....	15·30
British Yukon.....	White Pass to White Horse Spur, B.C., and Branch to White Horse	. . .	90·32
Buctouche and Moncton.....	Moncton, on Intercolonial Railway, to Buctouche, N.B.	. . .	32·00
Brockville, Westport and North Western....	Brockville to Westport, Ont.....	.....	45·00
Bruce Mines and Algoma..	Town of Bruce Mines to Rock Lake Mine and 66 miles under construction	.....	16·62
Calgary and Edmonton.....	Calgary to Edmonton.....	190·97	
	" MacLeod, District of Alberta...	104·96	
		———	295·93
Canada Atlantic, including Ottawa, Arnprior and Parry Sound Ry	City of Ottawa to Junction with Grand Trunk at Lacolle and U.S. boundary. Crosses the St. Lawrence at Coteau by bridge. Connects with Grand Trunk Railway at Coteau and Lacolle, and Ottawa to Depot Harbour, Lake Huron, near Parry Sound.....	. . .	400·30
Central Counties..... . ..... Leased to Canada Atlantic....	From Glen Robertson, on Canada Atlantic to Hawkesbury, Ont.....	21·00	
	South Indian, on Canada Atlantic, to Rockland.....	16·40	
		———	37·40
Canadian Northern.....	Port Arthur to Winnipeg.....	438·60	
	Beaver to Grand View..	131·30	
	Branches—Stanley Junction to Gunflint Lake	66·90	
	" Carman Junction to Learys	63·10	
	" Neepawa Junction to McCreary Junction.	33·20	
	" Gilbert Plains Junction to Erwood... ...	190·70	
	" Sifton Junction to Winnipegosis...	21·20	
	" Emerson to Ridgeville.....	11·60	
	" Winnipeg Transfer Track.....	4·85	
		——— ———	998·65
Canada Coals and Railway Co., formerly Joggins	Maccan Station, I.C.R., to Joggins Coal Mine.....	.....	12·00
Canada Southern.....	Main Line—Windsor, Ont., to Suspension Bridge....	226·18	
	Amherstburg Branch—Essex Centre to Amherstburg.	16·83	
	St. Clair Branch—St. Clair Junction to Courtright...	62·63	
	Fort Erie Branch—Fort Erie to Welland Junction...	17·50	

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Total.
Canada Southern	Erie and Niagara Branch—Old Fort Erie to Niagara.	30·60	
	Oil Springs Branch—Oil Springs to Oil City	5·50	
Leased	Sarnia, Chatham and Erie—Oil City to Petrolea	7·00	
"	Leamington and St. Clair—Comber to Leamington	15·95	
			382·19
Canada Eastern	Late Northern and Western of New Brunswick.		
	Gibson, opposite City of Fredericton to Chatham Junction, I.C.R.	107·00	
	Chatham Junction to Chatham and Logieville via Nelson	20·00	
	Blackville to Indiantown	9·00	
			136·00
Canadian Pacific: Owned	Main Line—Quebec to St. Martin's Junction	159·80	
	" Montreal to Ottawa	120·30	
	" Ottawa to Bonfield	223·60	
	" Bonfield to Vancouver	2,565·80	
			3,064·80
	Branches—Dunmore to Crows Nest	213·60	
	" Piles Junction to Grand Piles	26·90	
	" Berthier Junction to Berthier	2·10	
	" Joliette Junction to St. Félix	16·60	
	" Ste. Thérèse Junction to St. Jérome	13·30	
	" " to St. Eustache	6·00	
Montreal and Western	" St. Jérome to Labelle	66·90	
	" Labelle to Nominingue	23·50	
	" St. Lin Junction to St. Lin	15·10	
	" Buckingham Stn. to Buckingham Village.	4·60	
Brockville and Ottawa Railway	" Carleton Junction to Brockville	44·90	
	" Sudbury to Sault Ste. Marie	178·90	
	" Sudbury to Copper Mines	5·60	
	" Dyment to Ottamine	6·90	
	" Molson to Lac du Bonnet	22·00	
	" McGregor to Brookdale	36·00	
	" Winnipeg Junction to Emerson	63·60	
	" Les Riviere Junction to Manitou	99·60	
	" Winnipeg to Winnipeg Beach	50·20	
	" Rosenfeldt to Gretna	13·70	
	" Beach Junction to Teulon	37·30	
	Souris Branch. Kenmay to Estevan	156·20	
	Souris Branch. Glenboro' to Souris	45·70	
	Souris Branch. Deloraine to Napinka	18·70	
	Branches—Monteith Junction to Arcola	94·80	
	" North Portal to Pasqua	160·30	
	" New Westminster Jct. to New Westminster	8·20	
Lake Témiscamingue Colonization	" Mattawa to Kippewa	48·00	
	" Mission Junction to Huntington	10·00	
	" Revelstoke to Arrow Head	27·70	
	" Vancouver to Coal Harbour	1·20	
	" Three Forks to Sandon	4·20	
	" Wood Bay to Mowbray	25·70	
	" North Star Junction to Kimberly	19·10	
	" Deloraine to Lyleton	36·50	
	" Fernie to Fernie Mines	5·00	
	" Kickella to Esterhazy	62·80	
	" Marysville Junction to Maryville	1·05	
			1,586·20
	Total mileage owned		4,742·40
Leased Lines	Atlantic and North-west (in Canada)—		
	South end Lachine Bridge to Maine boundary, Que. 181·90		
	Renfrew Jct. to Eganville, Ont. 18·90		
		291·00	

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TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Total.
Canadian Pacific—*Continued.*			
Leased lines	St. Lawrence and Ottawa		
	Ottawa to Prescott, Ont	51·70	
	Chaudière Junction to Sussex St., Ottawa	6·60	
	Ontario and Quebec		58·30
	Montreal (Windsor Sta.,) to Toronto Jct	338·90	
	Mile End to Adirondack Jct	9·90	
	St. Luc Jct. to Western Jct	1·70	
	Toronto Jct. to Toronto (Union Station)	4·70	
	Leaside Jct. " "	5·30	
	London to Windsor	112·60	
			471·40
	Credit Valley—		
	Toronto Junction to St. Thomas	116·80	
	Streetsville Junction to Melville Jct	31·60	
	Cataract to Elora	27·30	
			175·70
	West Ontario Pacific—Woodstock to London		26·60
	Toronto, Grey and Bruce—		
	Toronto Junction to Owen Sound	116·80	
	Orangeville Junction to Teeswater	69·80	
	Glenannan to Wingham	4·50	
			191·10
	Guelph Junction—		
	Guelph Junction on Credit Valley Ry. to Guelph		15·00
	Montreal and Lake Maskinongé—		
	St. Félix to St. Gabriel de Brandon		11·00
	Montreal and Ottawa—		
	Vaudreuil to Jct. with the Canada Atlantic	86·70	
	Rigaud to Pt. Fortune	6·80	
			93·50
	Toronto, Hamilton and Buffalo—		
	Hamilton Junction to Hamilton		2·20
	Cap de la Madeleine—		
	From Main Line C.P.R., at Junction with Piles branch to Cap de la Madeleine		2·30
	New Brunswick—		
	Woodstock to Maine boundary	59·30	
	Newburg Junction to Fredericton	58·50	
	Aroostook Junction to Edmondston	57·00	
	St John and Maine—		174·80
	Vanceboro to McAdam Junction	6·00	
	McAdam Junction to Fairville	81·80	
	Fairville to Carleton	4·00	
	St. John Bridge and Railway Extension		91·80
	Fairville to St. John		2·00
	Fredericton—		
	Fredericton Junction to Fredericton		22·10
	New Brunswick and Canada—		
	McAdam Junction to St. Stephen	33·90	
	Watt Junction to St. Andrews	27·50	
	McAdam Junction to Woodstock	50·80	
	Debec Junction to Maine boundary	5·00	
	St. Stephen and Milltown Ry.—		117·20
	St. Stephen to Milltown		4·60
	Tobique Valley—		
	Perth Centre to Plaster Rock		28·00
	Manitoba and Northwestern—		
	Portage la Prairie to Yorkton	222·90	
	Binscarth to Russell	11·30	
	Yorktown to Sheko	42·02	
	Saskatchewan and Western—Minnedosa to Rapid City	18·20	
			294·66

TABLE showing Location of Railways, &c.—*Continued*

Name of Railway.	Description.	Distance. Miles.	Total.
Canadian Pacific—*Continued.*			
Leased lines	Manitoba South-western Colonization—		
	Manitou to Deloraine	100·30	
	La Riviere to Glenboro	103·30	
	Elm Creek to Carman	12·10	
		215·70	
	Great North-west Central, Chater to Miniota	71·00	
	Forrest to Lenore	40·70	
		111·70	
	British Columbia Southern—		
	Crows Nest to Kootenay Landing	180·00	
	Nelson to Proctor	20·40	
		200·40	
	Shuswap and Okanagan		
	From Jct. with C. P. R. at Sicamous to Lake Okanagan	50·80	
	Nakusp and Slocan—		
	Nakusp on Arrow Lake to Three Forks of Carpenter's Creek, B.C.	36·30	
	Columbia and Western—		
	Robson to Midway	99·60	
	Castlegar Jct. to Rossland	30·70	
	Trail to Smelter Junction	2·00	
	Mining Spurs, including Rossland to LeRoi	24·80	
		157·10	
	Kootenay and Arrowhead—		
	Lardo to Gerrard	33·40	
	Columbia & Kootenay—		
	Nelson to Robson	27·40	
	Spur to mouth of Kootenay River	·80	
	Slocan Junction to Slocan	31·30	
		59·50	
	Vancouver and Lulu Island, Vancouver, to Steveston	16·90	
	Calgary and Edmonton—		
	Calgary Junction to Strathcona	190·60	
	" to MacLeod Junction	105·60	
		296·20	
	Ottawa Northern and Western—		
	Ottawa to Waltham (including Interprovincial Bridge)	78·20	
	Hull Junction to Maniwaki	80·50	
		158·70	
	Total mileage leased		3,319·60
	" owned		4,742·40
	" in Can. Pac. system		8,062·00
Canadian Government Railways.	Intercolonial—		
	Halifax to Point Lévis (via Harlaka)	674·87	
	Dartmouth to Windsor Junction	12·12	
	Truro to Sydney	214·17	
	Mulgrave to Point Tupper Ferry	·90	
	North Sydney Junction to North Sydney	4·43	
	New Glasgow to Pictou Landing	7·57	
	Stellarton to Oxford Junction	79·63	
	Brown's Point to Pictou	1·70	
	Pugwash Junction to Pugwash Station	4·70	
	Painsec Junction to Pt. du Chêne	11·38	
	Moncton to St. John	89·22	
	Derby Junction to Indiantown	13·51	
	Dalhousie Branch	5·97	
	River Ouelle to St. Denis Wharf	6·25	
	St. Charles Junction to Chaudière Junction (via St. Henri)	16·38	
	Hadlow to Chaudière Curve	5·66	

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Distance. Total.
Canadian Government Railways.	Intercolonial—*Concluded*—		
	Freight Branches	27·57	
	Ys at various places	3·62	
		1,179·65	
	Windsor Branch (32 miles) of I. C. Ry. is operated by Dominion Atlantic Ry.		
	Drummond County—		
	Chaudière to Ste. Rosalie Jct. with Grand Trunk	115·93	
	St. Leonard to Nicolet and Balls Wharf on St. Lawrence	14·68	
			1,310·26
	Prince Edward Island—		
	Main Line—Alberton to Charlottetown	104·30	
	Royalty Junction to Georgetown	41·00	
	Branch—Mount Stewart to Souris	38·40	
	" Alberton to Tignish	13·30	
	" Emerald to Cape Traverse	12·00	
			209·00
			1,519·26
Cape Breton Railway	Point Tupper to St. Peters	30·00	
	Terminal at St. Peters	1·00	
			31·00
Caraquet	From Gloucester Junction, Intercolonial Railway, 5 miles south of Bathurst Station, easterly along the south shore of Baie des Chaleurs to Shippigan Harbour, N.B.		68·00
Carillon and Grenville	Carillon to Grenville, Que., connecting at both termini with Ottawa River Navigation Company's steamers (Gauge, 5 ft. 6 in.)		13·00
Central Ontario	From Picton, in Prince Edward County, to Bancroft Branch, Ormsby Jct. to Coe-Hill Iron Mines, Wallaston, County of Hastings; connects with Grand Trunk at Trenton, Midland Railway, 2 miles west of Stirling, and with Ontario and Quebec, in Township of Rawdon	117·00 8·00	125·00
Central Railway of New Brunswick, now New Brunswick Coal and Railway Co.	From Norton Station, on the Intercolonial Railway, to Chipman	44·66	
	Extension, Chipman to Newcastle, 15 miles under construction.		
Chateauguay and Northern	Montreal to L'Epiphanie, 37 miles under construction.		
Coast Line, Nova Scotia, now Halifax and Yarmouth	Yarmouth to Barrington Passage		50·20
Cobourg, Northumberland and Pacific, now Campbellford, Lake Ontario and Western	From Cobourg, Ont., to Junction with Central Ontario Railway, 49 miles under construction.		
Cumberland Railway and Coal Company (formerly Spring Hill and Parrsboro')	Spring Hill Junction, Intercolonial Railway, to Spring Hill Coal Mines, N.S., and Parrsboro', on the Bay of Fundy		32·00
	Spring Hill and Oxford Branch, 14 miles from Spring Hill Mines to Oxford Village on the Oxford and New Glasgow Branch, I.C.R., not in operation.		
Crows Nest Southern	International Boundary to Swinton, B.C.	43·38	43·38

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Total.
Grand Trunk (owned)—*Con.*			
Dominion Atlantic, comprising Windsor and Annapolis, Yarmouth and Annapolis and Cornwallis Valley and lease of Windsor Branch of Intercolonial	Windsor to Annapolis, N.S.	84·00	
	Annapolis to Yarmouth	87·00	
	Branches—		
	Wilmot to Forbrook	3·50	
	From Kentville to Kingsport, on Basin of Minas (formerly Cornwallis Valley Railway)	14·00	
	Windsor Branch of I.C.R.—Windsor to Windsor Junction, Intercolonial Railway, 14 miles from Halifax, leased	32 00	
			220·50
Edmonton, Yukon and Pacific	Strathcona to Edmonton, N.W.T.		4·50
Elgin and Havelock	From Elgin, County of Albert, N.B., to Petitcodiac Junction with Intercolonial Railway; thence to Havelock in County of King's, N.B	27 00	
	Havelock to Keith's Mills	1·00	
			28·00
Esquimalt and Nanaimo	Victoria to Wellington, Island of Vancouver		78·00
Fredericton and St. Mary's Railway Bridge	Over the St. John River, connecting the Fredericton Railway, at Fredericton, with the New Brunswick Railway, and Canada Eastern Ry., at St. Mary's		1·33
Grand Trunk (owned)—			
Main Line	Point Edward to Point Levis and Boundary Line, Vermont	544·40	
	York to Sarnia Tunnel	175·70	
	Suspension Bridge, Niagara Falls to Windsor	229·81	
			949·91
Branches, Eastern Division	Arthabasca Branch	35·34	
	St. Lambert to Ft. Covington (Boundary)	67·20	
	Brosseaus to Rouse's Point (Boundary)	36·79	
	St. Isidore to Province Line	24·15	
	St. Martine to Valleyfield	19·12	
	Bonaventure to Dorval	10·12	
	Jacques Cartier Union Ry	6·54	
	St. Paul Branch	1·08	
Eastern Division—*Concluded.*	St. Henri curve	0·31	
	Wharf Branch, Montreal	0·85	
	Wharf Branch, Lachine	0·68	
	Kingston Branch	2·25	
			204·43
Northern Division	Belleville Harbour to Midland	163·96	
	Madoc Junction to Eldorado	21·68	
	Port Hope to Peterboro'	30·57	
	Peterboro' to Lakefield	9·56	
	Millbrook Junction to Omemee Junction	15·12	
	Blackwater to Coboconk	36·19	
	Medonte Tramway	0·75	
	Scarboro Junction to Haliburton	114·82	
	Whitby Harbour to Manilla Junction	33·71	
	Stouffville to Jackson's Point	26·91	
	North Parkdale to Nipissing Junction	218·31	
	Muskoka Wharf Branch	1·00	
	Burlington Junction to Allandale	84·00	
	Allandale to Meaford	53·88	
	Colwell to Penetang	33·30	
	Beeton Junction to Lake Junction	40·62	
	Hillsdale Tramway	8·28	
			892·66

TABLE showing Location of Railways, &c. —*Continued.*

Name of Railway.	Description.	Distance. Miles.	Distance. Total.
Grand Trunk (owned)—*Con.*—			
Middle Division	Blackwell to Point Edward	5·21	
	Galt to Elmira	25·02	
	St. Mary's to London	21·13	
	Toronto Belt Line	12·79	
	Bathurst St., Toronto to Hamilton	37·95	
	Port Dover to Hamilton	40·25	
	Burlington Beach Line	11·33	
	Stoney Creek and Gages connections	2·56	
	Komoka to Sarnia	50·85	
	Sarnia to Point Edward	2·67	
	Petrolia Branch	4·71	
	Fort Erie to Glencoe	145·55	
	Glencoe to Kingscourt	21·01	
	Port Colborne to Port Dalhousie	25·14	
	Clifton to Port Robinson	9·75	
	Welland Junction	0·20	
	Goderich to Goderich Harbour	1·00	
	Harrisburg to Tilsonburg Junction	42·54	
	Port Dover to Tavistock	55·68	
	Simcoe to Port Rowan	17·00	
	Harrisburg to Southampton	128·44	
	Palmerston to Durham	26·73	
	Harriston to Wiarton	63·97	
	Stratford to Palmerston	36·60	
	Listowell to Kincardine	57·66	
	Hyde Park to Wingham	68·88	
	Cobourg to Harwood (not in operation)	15·00	
			929·62
			2,980·74
Leased and partly owned	Buffalo and Lake Huron Ry.		
	Fort Erie to Goderich	162·00	
	Owen Sound Branch		
	Park Head to Owen Sound	12·42	
			174·42
Lease or rented	Wharf Branch, Montreal		3·44
			3,158·60
St. Clair Tunnel and approaches.	Under the St. Clair River, between Sarnia and Port Huron—connecting the Grand Trunk Railway with railroads in State of Michigan		2·25
	(Length of tunnel between portals 6,000 ft., cylindrical in section with clear inside diameter of 19 ft. 10 inches).		
Great Eastern in Atlantic and Lake Superior system	From junction with South Eastern Railway at Yamaska to River St. Francis	6·00	
	From Nicolet to Junction with Grand Trunk Railway at St. Grégoire	7·00	
	Yamaska to Sorel	10·00	
	Pierreville to Nicolet, 15 miles under construction.		
	St. Grégoire to Chaudière Junction, 67 miles under construction.		23·00
Great Northern, including Lower Laurentian and Montfort and Gatineau Railways	From Riv. à Pierre Jct. with Quebec and Lake St. John Ry. to Hawkesbury	169·38	
	From Shawenegan Junction to Shawenegan Falls	3·98	
	From St. Jérôme Junction to St. Jérôme	1·74	
	From Junction with Montreal and Western, near St. Sauveur, to Arundel	33·00	
			208·10

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Total.
Gulf Shore	Junction with Caraquet Railway at Pokemouche to Tracadie operated by Caraquet Ry.		16·78
Halifax and South-western, formerly Nova Scotia Southern, including Central Nova Scotia.	Lunenburg to Middleton Junction	74 00	
	New Germany to Caledonia	22 00	
			96·00
Hampton and St. Martin, formerly St. Martin and Upham	From Hampton on Intercolonial Ry. to St. Martin, County of St. John, N.B., on Bay of Fundy		29·00
Hereford	From International Boundary to Dudswell, County Wolfe, connects with Canadian Pacific Railway at Cookshire, Maine Central at International boundary, and with Quebec Central at Dudswell	48·50	
	Dudswell to Lime Quarries (Dominion Lime Company)	4 80	
			53·30
Indian River	Megantic to Boundary, under construction, 18·10 miles		
Interprovincial Railway Bridge and approaches, now included in Ottawa, Northern & Western	Across the Ottawa River at City of Ottawa.. 1·40		
Irondale, Bancroft and Ottawa	From Junction with Grand Trunk Railway, near Kinmount Station, to Bancroft Station		48·00
Inverness and Richmond, now Inverness Ry. and Coal Co	Inverness to Point Tupper Junction		61·00
James Bay	From junction with Canada Atlantic Railway to Parry Sound, under construction, 3·90 miles.		
Kaslo and Slocan	From Kaslo to Sandon, B.C.	28·80	
	From Junction to Cody	3·00	
			31·80
Kent Northern	Richibucto, N.B., to Kent Jct. Intercolonial Railway		27·00
St. Louis and Richibucto	Richibucto to St. Louis		7·00
Kettle River Valley	Grand Forks to International boundary		3·86
Kingston and Pembroke	Main Line Kingston to Renfrew	103·10	
	Glendower Branch—Bedford to Zanesville Mine	4·00	
	Robertsville Branch—To Robertsville Mines	1·00	
	Branches—To Doran's Mills, Charcoal Works McLaren's Mills, Bethlehem Iron Mines, Lavant Mills, Clyde Forks Mills, Wilson's Mine, Carswell's Mills, William's Mine, Cameron Bay	4·75	
	(Connects with Grand Trunk at Kingston, Canadian Pacific at Sharbot Lake and at Renfrew.)		
			112·85
Klondike Mines Railway	Klondike City to Stewart River, 82 miles under construction		2·00
Lenora Mount Sicker	Lenora Mines to Crofton, B.C.		11·50
Lotbinière and Mégantic	Lyster Station, Grand Trunk, to St. Jean des Chaillons		30·34
L'Assomption	L'Epiphanie Station, C.P.R., to L'Assomption		3·50
Lake Erie and Detroit River	Walkerville, Ont., to St. Thomas	126·78	
Erie and Huron	Rondeau to Sarnia	72·63	
			199·41
London and Port Stanley	London to Port Stanley on Lake Erie		24·00
Lindsay, Bobcaygeon and Pontypool	From Bobcaygeon to 10 miles west of Pontypool on Canadian Pacific Railway, 39·50 miles under construction.		
Liverpool and Milton	From Liverpool, N.S., to Milton		5·00
Manitoulin and North Shore	Sudbury to Gertrude Mines	13·50	
	Stanley Jct. to Spanish River	1·50	
	Elsie Jct. to Mines	1·00	
			16·00
Maganetawan River	Burks Falls, on Grand Trunk Ry., to Maganetawan River		1·91
Middleton and Victoria Beach	Middleton to Victoria Beach, 41 miles under construction.		

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Total.
The Manitoba Ry., formerly—The Northern Pacific & Manitoba, the Winnipeg Transfer Ry., the Portage and Northwestern, the Waskada and North-eastern leased to Govt. of Manitoba and operated by the Canadian Northern	International Boundary to Winnipeg	65·94	
	Morris to Brandon	145·24	
	Departure to Hartney	50·94	
	Portage Junction to Portage la Prairie	52·52	
	Portage la Prairie to Beaver	20·02	
	Portage la Prairie to Delta	15·05	
	Hope Farm Branch	2·86	
	Fairground Branch	·84	
	Winnipeg Transfer Ry	1·24	
			354·65
Midland of Nova Scotia (formerly Stewiacke Valley)	From Windsor to Truro, N.S.		57·87
Massawippi Valley	From Lennoxville to Vermont boundary, there connecting with Connecticut and Passumpsic Rivers Railway; also connects with Grand Trunk and C.P.R., at Lennoxville	31·95	
	Branch—Stanstead Junction to Stanstead	3·51	
			35·46
Montreal and Vermont Junction.	From Junction with Stanstead, Shefford and Chambly Railway, 2¼ miles east of St. Johns, P.Q., to Junction with Vermont and Canada Railway, at Vermont boundary; also connects at Stanbridge with Lake Champlain and St. Lawrence Junction Railway		23·60
Montreal, Portland and Boston, now Montreal and Province Line	Junction with Grand Trunk at St. Lambert to Farnham	32·00	
	Marieville to St. Césaire	8·60	
	Farnham to Freligsburgh	18·00	
			58·60
Montreal and Atlantic (formerly South-eastern)	Main Line—Farnham to Richford on International boundary	43·70	
	Sutton Junction to Drummondville	59·20	
		102·90	
	Leased—Lake Champlain and St. Lawrence Junction—Stanbridge to St. Guillaume	60·50	
			163·40
	(Connects with Connecticut and Passumpsic, Grand Trunk and Stanstead, Shefford and Chambly Rys.)		
Morrissey, Fernie & Michel	From Swinton to Carbonado, B.C.		4·73
Nelson and Fort Sheppard	From Five Mile Point to Fort Sheppard on International boundary, B.C.		55·42
New Glasgow Iron, Coal and Railway Company, now Nova Scotia Steel and Coal Co.	From Ferrona Junction, I.C.R., to Sunny Brae		12·50
New Brunswick and Prince Edward Island	From Sackville Station, Intercolonial Railway to Cape Tormentine		36·00
New Westminster Southern	Douglas to South Westminster		24·10
Nipissing and James Bay	Junction of Pacific Junction Ry. and Canadian Pacific to Moose Factory, 3·90 miles under construction.		
Nosbonsing & Nipissing	From Lake Nosbonsing to Lake Nipissing		5·50
Ontario, Belmont and Northern, now Marmora Ry.—Leased to Central Ontario Ry.	From Junction with Central Ontario Ry. to Iron Mines in Township of Belmont		9·60
Orford Mountain	Eastman on C.P.R. to Lawrenceville and Kingsbury, Que.	26·50	
	Eastman to Bonnallie Lake " Bolton Springs Kingsbury to Windsor Mills 30 miles under construction.		
			26·50

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance. Miles.	Total.
Ottawa Valley in Atlantic and Lake Superior System	Lachute on C.P.R., to St. Andrews on Ottawa River		7·00
Ottawa and New York	From Ottawa to International Boundary near Cornwall		56·79
Pembroke Southern leased to Canada Atlantic	From Pembroke to Golden Lake		20·90
Philipsburg	Stanbridge Station of Canadian Pacific and Central Vermont Railways, to Philipsburg, Missisquoi Co.		7·50
Pontiac and Renfrew	From Wyman's Station, on Pontiac Pacific Junction Railway, to Bristol Iron Mines, County Pontiac, Que		4·25
Qu'Appelle, Long Lake and Saskatchewan	From Canadian Pacific Railway at Regina, Northwesterly to Long Lake and Prince Albert		253·96
Quebec Bridge and approaches to connect adjacent Railways	(Across St. Lawrence River at Quebec, under construction 10 miles.)		
Quebec and Lake St. John	Quebec to Roberval	189·00	
	Chambord Junction to Chicoutimi	51·00	
			240·00
Quebec Central	Main Line—Sherbrooke to Harlaka Junction, Intercolonial Railway, 5 miles from Lévis, Que	137·50	
	Chaudière Branch, Beauce Junction to St. Francis	15·00	
	Angus Branch—East Angus to Angus Mills	1·00	
	Tring Megantic—Tring Junction to Megantic	60·00	
	(Connects with Grand Trunk, Canadian Pacific and Boston and Maine Rys. at Sherbrooke).		213·50
Quebec and New Brunswick	From Chaudiere Junction to Connors, N.B., 135 miles, 3 miles under construction.		
Quebec, Montmorency and Charlevoix	Hedleyville, Parish of St. Roch, Quebec, to Cap Tourmente		30·00
Quebec Southern, comprising East Richelieu Valley Railway and United Counties—	Noyan Junction to St. Robert Junction	82·00	
And South Shore Railway	From St. Francis du Lac to Junction with Grand Trunk at St. Lambert	61·50	
			143·50
Red Mountain	From International boundary Line, B.C., to Rossland		9·53
Restigouche and Western, now Internatonial of New Brunswick	Campbellton, N.B., to St. Leonard's, 99 miles (20 miles under construction), 18 miles from Campbellton westward completed		18·00
Rutland and Noyan	International Boundary to Noyan Jct.		3·39
Stanstead, Shefford and Chambly	From Junction with Montreal and Vermont Junction Railway, near St. John, Que., easterly to Waterloo		43·00
Shore Line, now New Brunswick Southern	St. John to St. Stephen, N.B		82·50
St. John Bridge and Railway Extension, now leased by Canadian Pacific Ry.	From St. John to Fairville, crosses St. John River at the Falls by a cantilever steel bridge, and connects Intercolonial Railway with New Brunswick Railway, C.P.R., included in Canadian Pacific System, 2·00 miles.		
St. John Valley and Rivière du Loup	From Fredericton, N.B., to Woodstock, N.B., 66 miles, of which 6 miles are under construction		
Salisbury and Harvey (formerly Albert Railway)	Salisbury to Albert, N.B.		45·00
Schomberg and Aurora	Bond Lake, Ont., to Schomberg, 15 miles under construction.		
St. Lawrence and Adirondack	From Jct. with Canada Atlantic near Valleyfield to International Boundary	19·92	
	Beauharnois to Junction with Canadian Pacific at Adirondack Junction	12·90	
			32·82

TABLE showing Location of Railways, &c.—*Concluded.*

Name of Railway.	Distribution.	Distance. Miles.	Distance. Total.
Sydney and Louisburg (Dominion Coal Co)	Sydney Harbour to Louisburg Harbour	39·15	
	Branches to coal mines	9·52	
			48·67
St. Mary's River	Stirling to Cardston (District of Alberta.)		47·00
Temiscamingue and Northern Ontario	North Bay to Lake Temiscamingue, 112 miles under construction.		
Thousand Islands	Gananoque on St. Lawrence River to Gananoque Station, G.T.R		6·33
Témiscouata	Rivière du Loup, Que., on Intercolonial, to Edmundston, N.B., on the New Brunswick Railway	81·00	
	Branch—Edmundston to Connors, on St. John River	32·00	
			113·00
Temiscamingue and Northern Ontario	200 miles under construction.		
Tilsonburg, Lake Erie and Pacific	Port Burwell to Ingersoll		35·33
Toronto, Hamilton and Buffalo, including Brantford, Waterloo and Lake Erie	Waterford Jct. with Canada Southern to Welland Junction with Canada Southern—passing through the city of Hamilton	79·88	
	Hamilton to Grand Trunk Junction	1·77	
	Belt Line, Hamilton	3·52	
	Chautler's Junction to Canboro road	2·61	
			87·78
Trans-Canada	From Roberval to Port Simpson across the continent, ·60 mile from Roberval, westward under construction.		
Victoria and Sidney	Victoria to Sidney, B.C.		16·26
Victoria Terminal Railway and Ferry	Cloverdale to Port Guichon and 1·14 miles in City of Victoria		18·40
Vancouver, Victoria & Eastern	Laurier to Grand Forks	14·40	
	Grand Forks Junction to Danville	2·10	
			16·50
Vancouver, Westminster and Yukon	3·81 miles under construction		13·89
Wellington Colliery	Union Bay to Cumberland		10·75
York and Carleton	Junction with Canada Eastern Ry. at Cross Creek Station to Stanley, N.B.		5·75

No. 1.—Summary Statement of Capital for the Year ended June 30, 1904.

SUMMARY STATEMENT OF CAPITAL

FOR THE

FISCAL YEAR ENDED JUNE 30, 1904

NOTE A.—With regard to certain subsidies granted by Dominion Parliament.

By 60-61 Vic., cap. 4, 1897, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, 1900, and 1 Edward VII., cap. 7.—A subsidy was authorized on certain mileage of these railways specified in the said Acts of Parliament, of $3,200 per mile, and a further subsidy beyond the sum of $3,200 per mile, of fifty per cent on so much of the average cost of the said specified mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile.

The amounts of certain of the subsidies authorized by Parliament which are given in this statement, include the determined portion of the subsidies, viz., the amounts produced by the $3,200 per mile, but the other portion, being an undetermined amount, cannot be shown here.

Of the Railways shown in this statement, the following is the mileage which may be entitled to the additional subsidies under these said Acts :—

Algoma Central	225 miles.
Bruce Mines and Algoma	9 "
Canadian Pacific—Extension of Pipestone Branch	50 "
" Extension of Waskada Branch	20 "
" Extension of Stonewall Branch	35 "
Cape Breton Railway	30 "
Central Railway of New Brunswick	45 "
Coast Railway of Nova Scotia, now Halifax and Yarmouth	61 "
Drummond County, now Intercolonial	42½ "
East Richelieu Valley, now in Quebec Southern	24 "
Great Northern	44 "
Gulf Shore	5½ "
Ontario and Rainy River, now in Can. Northern	80 "
Ottawa, Arnprior and Parry Sound	56 "
Ottawa and Gatineau, now Ottawa, Northern & Western	86 "
Ottawa and New York	53·87 "
Pembroke Southern	24 "
Philipsburg Railway and Quarry Co	0 66/100 "
Pontiac Pacific Junction	21½ "
Restigouche and Western	20 "
St. Lawrence and Adirondack	13½ "
St. Stephen and Milltown	1 14/100 "
Tilsonburg, Lake Erie and Pacific	28 "
United Counties, now in Quebec Southern	1 "
Inverness and Richmond	53 "
Montreal and Province Line	19 "
Nova Scotia Southern	97 "
York and Carleton	6 "
Atlantic and Lake Superior—Baie des Chaleurs	30 "
Central Ontario	20 "
Midland of Nova Scotia	58 "
Kingston and Pembroke	41 "
Manitoulin and North Shore	16 "
Midleton and Victoria Beach	5 "

NOTE B.—Memorandum of adjustment with Statement No. 3, Part II, being Accountant of Department of Railways and Canals Statement of Railway Subsidies to June 30, 1904.

		$ cts.
Total Dominion Government aid paid—Statement I.		182,222,277 86
Add Atlantic and North-west Railway (portion in United States)		1,732,500 00
St. Catharines and Niagara Railway (Electric Railway) in Electric Ry. Statistics		38,400 00
Oshawa Railway and Navigation Co " " "		22,400 00
		184,015,577 86
LESS—Intercolonial Railway, including Windsor Branch Railway (cost)	$ 72,742,163 75	
Prince Edward Island Railway (cost)	6,128,116 80	
Canadian Pacific Railway, construction of lines built by Dominion (not including surveys) and transferred to Canadian Pacific Railway Co.	31,145,738 54	
Fredericton and St. Marys Bridge Company (loan)	360,000 00	
Grand Trunk Railway Company (loan)	15,142,633 33	
Kent Northern Railway (rails loan)	58,334 27	
Salisbury and Harvey Railway (loan, including rails)	29,391 01	
St. John Bridge and Railway Extension (loan)	433,900 00	
Windsor and Annapolis Railway	1,193,369 00	
Canadian Pacific Railway subsidy	25,000,000 00	
Western Counties Railway subsidy	500,000 00	152,673,646 70
Agreeing with subsidy No. 3, Part II, Accountant of Department of Railways and Canals Statement to June 30, 1904		$ 31,341,931 16

4-5 |

Accc
June

Total
Add

Less

Agr

STEAM RAILWAYS

SUMMARY STATEMENTS RELATING TO MILEAGE, ROLLING STOCK, CHARACTERISTICS OF ROADS, OPERATIONS, PASSENGERS AND FREIGHT CARRIED, EARNINGS, OPERATING EXPENSES AND ACCIDENTS

No. 3.—Summary Statement of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Length of Double Track.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construction.	Iron Rails.	Steel Rails.			Iron Rails.	Steel Rails.
		Miles.	Miles.	Mls.	Miles.	Miles.	Miles.	Lbs.	Lbs.
1	Alberta Railway and Coal Co.	66·72			66·72	13·21			56
2	Albert Southern. 16·00 Harvey Branch 3·00	19·00			19·00				
3	Algoma Central and Hudson Bay	91·75			91·75	51·99			60 to 85
4	Atlantic & Lake Superior, comprising— Baie des Chaleurs 100·00 Great Eastern 23·00 Ottawa Valley 7·00	130·00			130·00	1·50			56
5	Bay of Quinté Ry., including Kingston, Napanee & Western	93·37			93·37				56 to 70
6	Bedlington and Nelson	15·30			15·30	1·28			56
7	Beersville Coal and Railway Co.	8·63			8·63	·62			56
8	British Yukon	90·32			90·32	3·00			56 & 45
9	Brockville, Westport & North Western.	45·00			45·00	2·00			56
10	Bruce Mines & Algoma	16·62	·66		16·62	·23			56
11	Buctouche and Moncton.	32·00			32·00	2·50			54 & 56
12	Calgary and Edmonton 296·20								
13	Canada Atlantic, including Ottawa, Arnprior and Parry Sound 400·30 Leased lines— Central Counties 37·40 Pembroke Southern 20·90	458·60			458·60	97·50			56 to 75
14	Canada Coals and Railway Co., formerly Joggins	12·00			12·00	3·50			56
15	Canada Eastern	136·00			136·00	6·50			56½ to 60
16	Canada Southern 359·24 Leased lines— Sarnia, Chatham & Erie 7·00 Leamington & St. Clair 15·95	382 19			382·19	180·60	149·34		100 & 89
17	Canadian Northern, including Winnipeg Great Northern 40·00 Port Arthur, Duluth & West'n 85·00 Manitoba and South-eastern 107·90 Lake Manitoba Ry. & Canal Co.'s line 125·00 Ontario and Rainy River Ry. 164·00 Mantoba Railway (formerly Northern Pacific & Manitoba & Portage & North-western Rys.) operated by Canadian Northern	998·65 354·65			1,353·30	97·00			56 to 60
	Canadian Government Railways—								
18	Intercolonial, exclusive of Windsor Branch, 32 miles, but including Drummond County	1,310·26			1,310·26	357·88			56 to 110
19	Prince Edward Island	209·00	47·50		209·00	17·29			50 to 56
20	Canadian Pacific 4,742·40 Leased lines— Calgary and Edmonton 296·20 Fredericton 22·10 New Brunswick 174·80 New Brunswick and Canada 117·20								

SESSIONAL PAPER No. 20

Roads, &c., for the Year ended June 30, 1904.

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.	Number of Highway Crossings at rail-level. Guarded.	Number of Highway Crossings at rail-level. Not guarded.	Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Highway Crossings under Railway.	Number of Farm Crossings under Railway.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
						Feet.						Feet.		Ft.	
2640	Angle-bars			4						3		573	53	4 8½	1
															2
3000	Bonzano joints, angle-bars		1	24	2	15 8			1	1	1	478	132	4 8½	3
2640	Fishplates				3	23				1			66	4 8½	4
3000	Angle plates			73			2		4	4	1	955	65	4 8½	5
2640	Angle-bars		2							2		573	53	4 8½	6
2600	Fishplates			3						1				4 8½	7
2816	Angle-bars									1		359	205	3 00	8
2640	Fisher bridge joint			35			19					717	58	4 8½	9
2640	Angle-bars		1						1	1		637	79	4 8½	10
2640	Fishplates			20					1	1		816	74	4 8½	11
2640															12
2816	Angle-bars, fishplates	2	11	197	4	22	6		13	10	3	955	66	4 8½	13
3000	Fishplates			8						1		955	79	4 8½	14
2640	Fish and angle-plates		1	35					1	4	2	955	80	4 8½	15
2816	Angle splice		11	420	19	19 to 22	16	5	17	17	10	913	16	4 8½	16
2640	Angle-bars	208	1	735			2		13	9	13	573	63	4 8½	17
2640 3168	Bar, angle, fishplates	2	26	613	30	18½ to 35	29	24	12	29	23	694	65	4 8½	18
2640	Fish, angle and continuous			1,005	2	17½	5	2				396	90	3 6	19

No. 3.—Summary Statement of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Length of Double Track.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construction.	Iron Rails.	Steel Rails.			Iron Rails.	Steel Rails.
		Miles.	Miles.	Mls.	Miles.	Miles.	Miles.	Lbs.	Lbs.
	Can. Pac.—Leased lines—*Con.*								
	St. John and Maine..... 91·80								
	St. John Bridge and Railway Extension..... 2·00								
	St. Stephen and Milltown.. 4·60								
	Tobique Valley ... . 28·00								
	Cap de la Madeleine..... 2·30								
	Montreal and Lake Maskinongé ... ... 11·00								
	Atlantic and North-west .. 200·70								
	Montreal and Ottawa ..... 93·50								
	Ontario and Quebec..... 471·40								
	St. Lawrence and Ottawa .. 58·30								
	Credit Valley..... ..... 175·70	8,062·00	371·50	....	8,062·00	1,226·40	35·70	.....	56 to 100
	Guelph Junction .... 15·00								
	Toronto, Hamilton & Buffalo 2·20								
	Toronto, Grey and Bruce.. 191·10								
	West Ontario Pacific..... 26·60								
	Manitoba & North-western. 294·60								
	Manitoba South-western Colonization ... ... 215·70								
	Kootenay and Arrowhead.. 33·40								
	Columbia and Kootenay.... 59·50								
	Nakusp and Slocan ..... 36·30								
	Shuswap and Okanagan... 50·80								
	Ottawa, Northern & Western 158·70								
	Columbia and Western..... 157·10								
	Great North-west Central... 111·70								
	British Columbia Southern.. 200·40								
	Vancouver and Lulu Island 16·90								
21	Cape Breton Ry.....	31·00	.....	.....	31·00	2·00	.....	.....	60 & 72
22	Caraquet..... ...	68·00	.....	.....	68·00	3·25	.....	.....	50
23	Carillon and Grenville....	13·00	.....	13·00	.....	·25	.....	65	.....
24	Central Ontario..... .	125·00	.....	.....	125·00	16·00	.....	. ...	56 & 70
	Leased line— Marmora Ry. & Mining Co., formerly Ontario, Belmont and Northern.....	9·60	.... . .	.....	9·60	.....	.....	.....	56
25	Chateauguay and Northern.....	37·00	.....	.....	37·00	.....	.....	.....	.....
26	Cobourg, Northumberland and Pacific, now Campbellford, Lake Ontario and Western Railway.....	.....	49·00	....	.....	.....	.....	.....	.....
27	Crow's Nest Southern.....	43·38	.....	.....	43·38	6·64	... ..	.....	68
28	Cumberland Ry. and Coal Co.	32·00	14·00	.....	32·00	16·00	....	.....	67 & 80
29	Dominion Atlantic, comprising— Windsor and Annapolis..... 87·50 Cornwallis Valley..... ..... 14·00 Yarmouth and Annapolis (Western Counties).. .. 87·00 Windsor Branch, leased from Intercolonial. ..... 32·00	220·50	.....	.....	220·50	21·00	.....	.....	50 to 80
30	Edmonton, Yukon and Pacific.....	4·50	.....	.....	4·50	... .	.....	.....	60
31	Elgin and Havelock.....	28·00	.....	.....	28 00	2·00	.....	.....	46 & 56
32	Esquimalt and Nanaimo	78·00	.....	.....	78·00	5·00	.....	....	54 to 60
33	Fredericton & St. Mary's Ry. Bridge Co.	1·33	.....	1·33	.....	.....	....	56	.....

Roads, &c., for the Year ended June 30, 1904—*Continued.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.	Number of Highway Crossings at rail level.		Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Highway Crossings under Railway.	Number of Farm Crossings under Railway.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	
			Guarded.	Not guarded.											Number.
						Ft.						Ft.		Ft.	
2640	Bonzano joints, angle-bars and fishplates.	10	43	4,879	93	14·6 to 22	83	....	56	77	74	288	237	4·8½	20
2640	Six hole steel angle-bars	....	....	14	....	....	....	....	....	1	....	715	79	4·8½	21
2600	Fishplates	....	....	12	....	....	....	....	1	1	1	1,000	60	4·8½	22
1760	Chairs	....	1	8	1	16	....	....	....	1	....	1,910	100	5·6	23
2640	Angle-bars and fishplates	....	....	105	1	....	....	....	3	4	1	955	105	4·8½	24
2300	Fishplates	....	....	8	....	....	....	....	....	1	....	717	72	4·8½	
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	25
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	26
2816	Angle-bars	....	....	7	....	....	....	....	....	....	....	573	105	4·8½	27
2240	Angle-bars	....	....	18	....	....	....	....	....	1	....	820	160	4·8½	28
2640	Angle fishplates	....	1	109	4	16·5 & 22	1	3	....	4	2	637	79	4·8½	29
....	Angle-bars	....	....	8	....	....	....	....	1	....	....	556	52	4·8½	30
2640	Fishplates	....	....	25	....	....	....	....	1	1	....	716	90	4·8½	31
2992	Angles, fishplates, bolts	....	....	17	2	23	3	....	2	2	....	10	80	4·8½	32
2564	Angle and fishplates	....	....	....	....	....	....	....	....	....	....	....	....	....	33

No. 3.—Summary Statement of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Length of Double Track.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construction.	Iron Rails.	Steel Rails.			Iron Rails.	Steel Rails.
		Miles.	Miles.	Mls.	Miles.	Miles.	Miles.	Lbs.	Lbs.
34	Grand Trunk	880·35							
	Wharf Branch, Montreal	3·44							
	Great Western	561·80							
	Brantford, Norfolk and Port Burwell	34·39							
	Buffalo and Lake Huron	162·00							
	Grand Trunk, Georgian Bay and Lake Erie	175·62							
	Owen Sound Branch	12·42							
	London, Huron and Bruce	68·00							
	Waterloo Junction	10·25							
	South Norfolk	17·00							
	Wellington, Grey and Bruce	168·18							
	Northern	172.10							
	North Simcoe	33·00							
	Hamilton & North-western	172·00	3,158·60		3,158·60	863·57	561·50		56–100
	Northern Pacific Junction	111·32							
	Toronto Belt Line	12·79							
	Midland	166·00							
	Grand Junction	85·21							
	Toronto and Nipissing	85·00							
	Lake Simcoe Junction	26·00							
	Victoria	53·00							
	Whitby, Port Perry and Lindsay	46·00							
	Cobourg, Blairton and Marmora	15·00							
	Jacques Cartier Union	6·50							
	Montreal and Champlain Junction	61·73							
	Beauharnois Junction	19·50							
35	Great Northern Ry. of Canada, including Lower Laurentian, and Montford & Gatineau Colonization Ry	208·10			208·10	13·00			56 & 70
36	Gulf Shore	16·78			16·78	1·01			56
37	Halifax and Yarmouth	50·20			50·20	3·26			56
38	Hampton and St. Martins	29·00			29·00	·50			56
39	Hereford	53·30			53·30	8·31			56
40	Halifax and South-western (formerly Nova Scotia Southern)	96·00			96·00				56
41	Indian River		18·10						
42	International Ry. Co. of New Brunswick (formerly Restigouche & Western)	18·00	20·00		18·00	·76			56 & 60
43	Inverness Ry. & Coal Co. (formerly Inverness and Richmond)	61·00			61·00	4·00			56
44	Irondale, Bancroft and Ottawa	48·00			48·00	2·50			56
45	James' Bay		3·90						
46	Kaslo and Slocan, B.C	31·80			31·80	2·80			45
47	Kent Northern	27·00			27·00				56
	St. Louis and Richibucto (not in operation)	7·00	34·00		7·00	·25			56
48	Kingston and Pembroke	112·85		9·75	103 10			50·84	56
49	Klondyke Mines	2·00	82·00		2·00				52
50	Kettle River Valley	3·86			3·86				60
51	L'Assomption —(abandoned)	3·50			3·50				

SESSIONAL PAPER No. 20

Roads, &c., for the Year ended June 30, 1904—*Continued.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.	Number of Highway Crossings at rail level.		Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Highway Crossings under Railway.	Number of Farm Crossings under Railway.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
			Guarded.	Not guarded.											
						Ft.						Ft.		Ft.	
2900 3200	Angle-bars and fishplates	11	98	3,059	249	15·9½ to 40·0	140	140	58	63	72	717	66	4·8½	34
2640	Angle-bars and fishplates	1	3	125	4	21½	...	1	8	8	...	2,292	104	4·8½	35
2600	Fishplates	...	...	19	...	...	...	...	...	1	...	573	53	4·8½	36
2640	Angle-bars	...	...	31	...	...	...	...	...	1	...	955	79	4·8½	37
2640	Fishplates	...	...	18	...	...	...	...	...	1	...	955	90	4·8½	38
2800	Angle-bars and fishplates	...	...	28	...	...	...	...	2	3	...	955	66	4·8½	39
2640	Angle-bars	...	...	50	1	20	...	...	...	1	3	819	80	4·8½	40
....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	41
2600	Fishplates and angle-bars	...	...	4	...	...	...	...	...	1	...	528	79	4·8½	42
3000	Angle-bars	...	...	25	...	...	...	...	...	1	...	637	78	4·8½	43
2640	Fishplates	...	...	16	...	...	...	...	...	1	...	1,000	60	4·8½	44
....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	45
2640	Angle-bars and bolts	...	...	13	1	22	2	...	...	1	...	193	171	3·00	46
2432	Fishplates and bolts	...	...	5	...	...	...	...	...	1	...	1,000	60	4·8½	47
2432	" "	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2640	Fishplates	...	...	56	1	16	1	1	6	5	...	955	79	4·8½	48
....	Angle-bars	...	...	...	...	...	...	...	...	...	...	22	158	3·00	49
2816	4-hole angle-bars	...	...	5	...	...	...	...	1	2	...	409	578	4·8½	50
....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	51

No. 3.—Summary Statement of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Length of Double Track.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construction.	Iron Rails.	Steel Rails.			Iron Rails.	Steel Rails.
		Miles.	Miles.	Mls.	Miles.	Miles.	Miles.	Lbs.	Lbs.
52	Lake Erie and Detroit River, including Erie and Huron...199 41 Leased lines—London & Port Stanley..... 24·00	223·41	.....	.....	223.41	46·59	....	.....	51 to 70
53	Lenora Mount Sicker	11·50	.....	.....	11·50	·28	.....	.....	20 & 28
54	Lindsay, Bobcaygeon & Pontypool....	.....	39·50	.....	.....	.....	.....	.....	.....
55	Liverpool and Milton	5·00	.....	.....	5·00	.....	.....	.....	56
56	Lotbinière and Mégantic	30·34	....	.....	30·34	3·00	.....	.....	56
57	Maganetawan	1·91	.....	.....	1·91	....	.....	.....	56, 65
58	Manitoulin and North Shore.....	16·90	.....	.....	16·00	1·50	.....	... .	65
59	Massawippi Valley.....	35·46	.....	.....	35·46	7·44	....	.....	60
60	Middleton and Victoria Beach.....	.....	41·00	.....	.....	.....	.....	.....	.....
61	Midland of Nova Scotia.....	57·87	.....	.....	57·87	2·75	.....	.....	60
62	Montreal & Atlantic (formerly South-eastern)..... 102·90 Lake Champlain & St. Lawrence Junction..... .... 60·50	163·40	..... .	.....	163·40	25·70	5·50	.....	72 to 80
63	Montreal and Province Line (formerly Montreal, Portland and Boston).. ...	58·60	.....	.....	58·60	.....	.. ...	.....	56 & 60
64	Montreal and Vermont Junction.....	23·60	..... .	.....	23·60	2·00	.....	.....	72 & 60
65	Morrissey, Fernie and Michel, B.C ...	4·73	.....	.....	4·73	.....	.....	.....	.....
66	New Westminster Southern	24·10	.....	.....	24·10	2·97	....	.....	56
67	Nelson and Fort Sheppard.....	55·42	.....	.....	55·42	3·18	.....	.....	56
68	New Brunswick Coal and Ry. Co. (formerly Central of New Brunswick).....	44·66	15·00	.....	44·66	2·00	.....	.....	52-56
69	New Brunswick & Prince Edward Island	36·00	.....	.....	36·00	1·50	. ....	.....	56
70	New Brunswick Southern (formerly Shore line)...	82·50	.....	....	82·50	2·50	.....	.....	50
71	Nosbonsing and Nipissing.....	5·50	.....	.....	5·50	1·25	.... .	.....	56
72	Northern Colonization	23·50	. .. ...	.....	23·50	.....	.....	.....	..... .
73	Nova Scotia Steel & Coal Co.'s Ry.....	12·50	... ...	.....	12·50	3·87	. ...	.....	56
74	Orford Mountain.....	26·50	30·00	.....	26·50	1·00	.... .	....	56
75	Ottawa, Northern and Western, including Pontiac Pacific Junction Ry. and Interprovincial Bridge.....158·70	.....	.....	.....	.....	6·00	.....	.....	56 & 70
76	Ottawa and New York	56·79	.....	. ..	56·79	3·24	.....	.....	65
77	Philipsburg Ry. and Quarry Co.'s Ry...	7·50	....		7·50	....	.....	.....	56
78	Pontiac and Renfrew	4·25	....		4·25	·75	.....	.....	56
79	Princeton Branch of Washington Co. U. S. A.....	.....	.....	.....	.....	.....	.....	.....	.....
80	Qu'Appelle, Long Lake & Saskatchewan	253·96	.....	. ...	253·96	11.33	.... .	.. ..	56
81	Quebec Bridge and approaches.....	.....	10·00	.....	.....	.....	.....	.....	.....
82	Quebec Central.....	213·50	.. . ...	....	213·50	20·50	.....	.....	56 & 70
83	Quebec and Lake St. John.	240·00	....	.....	240·00	33·50	.....	.....	60 to 70
84	Quebec Railway, Light and Power Co. (formerly Quebec, Montmorency and Charlevoix)..	30·00	....	. ..	30·00	5·00	6·00	.....	56-70
85	Quebec and New Brunswick.....	.....	3·00	.....	.....	.....	.....	.....	....
86	Quebec Southern, comprising the United Counties & East Richelieu Valley and South Shore Railways	143·50	....		143·50	9·00	.....	.....	56 & 80
87	Red Mountain.....	9·59	.....	.....	9·59	3·60	....	.....	56 & 80
88	Rutland and Noyan.	3·39	.....	.....	3·39	.....	.....	.....	80
89	Salisbury and Harvey.	45·00	.....	30·00	15·00	·06	.....	56	56
90	Schomberg and Aurora,...	15·00	.....	.. ..	15·00	·38	. ..	.. ..	56

Roads, &c., for the Year ended June 30, 1904—*Continued.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.	Number of Highway Crossings at rail level. Guarded.	Number of Highway Crossings at rail level. Not guarded.	Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Highway Crossings under Railway.	Number of Farm Crossings under Railway.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
						Feet.						Ft.		Ft.	
3000	Angle-bars		6	261	5	20 to 21			10	12		717	60	4·8½	52
3168	Fishplates and bolts			5								764	501	3·00	53
															54
2500	Fishplates											100	90	4·8½	55
2640	Angle-bars			9					1	2		717	80	4·8½	56
2800	"			1						1		515	82	4·8½	57
3000	"									2		717	650	4·8½	58
2800	Fishplates			29	1	17	1			4	1	573	74	4·8½	59
															60
2640	Angle-bars			25					1	2		882	55	4·8½	61
2904	Fishplates and angle-bars			164	1	19			6	6	2	441	140	4·8½	62
3000	Fishplates, bolts and chain			30					3	5	2	1,432	54	4·8½	63
3000	Fishplates			51						3		2,865	52	4·8½	64
2880	Fishplates and angle-bars							1		2		573	160	4·8½	65
2640	Angle-bars				1	20				2		717	89	4·8½	66
2640	"			7						2		573	132	4·8½	67
2640	Fishplates		21	2						1		816	74	4·8½	68
2400	"			26						1		750	66	4·8½	69
2992	"			15					3	3		573	85	4·8½	70
3000	"			2					1	1		955	132	4·8½	71
															72
2640	Bar with bolts			5						1	1	955	79	4·8½	73
2640	Plates and bolts			17						1		955	74	4·8½	74
2640	Plain and angle-plates		3	107	10	21	9		4	5		573	106	4·8½	75
2750	Angle-bars			70	1	22			3	3		2,865	39	4·8½	76
2816	Fishplates			7						1	1	955	52	4·8½	77
2640	"									1		717	106	4·8½	78
															79
2640	Angle-bars and fishplates	36		110						1	1	1,146	65	4·8½	80
															81
2640	Fish and angle-plates			115			3		2	7	2	882	76	4·8½	82
2640	Fishplates and angle-bars	1	2	56			3	9		2	4	717	105	4·8½	83
2640	Plain and angle fishplates			10					1	2		1,433	42	4·8½	84
															85
2640	Fishplates and angle-bars			85					10	9		717	40	4·8½	86
2640	Angle-bars									1		287	184	4·8½	87
3000	"			3					1	1		637	15	4·8½	88
2600	Fishplates and sleeves			27	2	15				1		717	80	4·8½	89
2650	Six bolt angle-bars			15				2	1	1			106	4·8½	90

No. 3.—Summary Statement of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Length of Double Track.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construction.	Iron Rails.	Steel Rails.			Iron Rails.	Steel Rails.
		Miles.	Miles.	Mls.	Miles.	Miles.	Miles.	Lbs.	Lbs.
91	Stanstead, Shefford and Chambly	43·00		12·00	31·00	2·00		60	60
92	St. Clair Tunnel, Yard and approaches	2·25			2·25	11·00			100
93	St. John Valley and Rivière du Loup		6·00						
94	St. Lawrence and Adirondack	32·82			32·82	6·93			80
95	St. Mary's River	47·00			47·00				28 & 35
96	Sydney & Louisbourg (Dom. Coal Co.)	48·67			48·67	27·64			80
97	Temiscamingue and Northern Ontario		200·00						
98	Temiscouata	113·00			113·00	3·00			56
99	Tilsonburg, Lake Erie and Pacific	35·33			35·33	5·00			56, 65, 70
100	Thousand Islands	6·33			6·33	1·00			56 & 60
101	Toronto, Hamilton and Buffalo	85·58			85·58	26·12	4·69		56 to 80
102	Trans-Canada		60·00						
103	Vancouver, Victoria and Eastern Ry. and Navigation Co	16·50			16·50	3·00			60
104	Vancouver, Westminster and Yukon	13·89	3·81		13·89				60
105	Victoria and Sidney, B.C	16·26			16·26	1·20			50
106	Victoria Terminal Ry. and Ferry Co.	18·40			18·40	1·50			56 & 60
107	Wellington Colliery Co	10·75			10·75				50
108	York and Carleton	5·75			5·75	·10			56
	Total	19,610·87	1,014·97	66·08	19,544·79	3,327·48	762·72		

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Roads, &c., for the Year ended June 30, 1904—*Concluded.*

Number of Tires per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.	Number of Highway Crossings at rail level.		Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Highway Crossings under Railway.	Number of Farm Crossings under Railway.	Number of Level Crossings of other Railways.	Number of Junction with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
			Guarded.	Not guarded.		Feet.						Ft.		Ft.	
2640	Fishplates, bolts, chain			42	1	18	....	..	3	4	....	1,910	60	4·8½	91
...	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	4·8½	92
...	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	93
2816	Angle-bars	.....	....	31	1	20·6	2	....	2	3	....	478	63	4·8½	94
2113 / 2640	Fishplates	1	....	12	....	.....	.....	.....	.....	1	...	582	79	3·00 / 4·8½	95
2300	Angle-bars and bolts	.....	1	30	2	18	....	....	6	1	....	955	90	4·8½	96
....	.....	.....	...	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	97
2640	Fish and angle bars	.....	....	38	....	.....	....	2	1	2	1	819	79	4·8½	98
2640	Angle-bars	4	....	39	1	21	3	....	2	4	....	955	52	4·8½	99
3000	Angle-iron	....	....	8	....	.....	.....	....	....	1	....	410	84	4.8½	100
3000	Angle-bars	....	6	122	15	22	....	....	5	6	3	675	79	4·8½	101
....	.....	....	....	.....	....	.....	.....	....	....	...	....	.....	.....	.....	102
2816	Angle-bars	....	....	15	1	22	....	....	1	....	....	716	32	4·8½	103
2640	"	....	....	15	1	21	....	....	2	1	....	819	134	4·8½	104
2464	Fishplates	....	....	13	....	.....	1	....	....	1	....	637	105	4·8½	105
2640	Angle-bars	....	....	31	....	.....	.....	.....	1	2	..	573	26	4·8½	106
2992	Fishplates and bolts	....	....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	107
2600	Side plates and bolts	...	....	8	....	.....	.....	....	....	1	....	716	64	4·8½	108
		286	239	13,493	463	.....	333	190	272	381	224	....	....	...	

No. 4.—Summary Statement of the Operations of the

Number.	Name of Railway.	Mileage.	Train Mileage.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
1	Alberta Railway and Coal Co.	66·72	.....	14,116	27,776	41,892
2	Algoma Central and Hudson Bay	91·75	5,380	5,935	18,810	30,125
3	Atlantic and Lake Superior, comprising— Baie des Chaleurs 100·00; Great Eastern, not under traffic 23·00; Ottawa Valley, not under traffic 7·00	100·00	60,000	5,000	.....	65,000
4	Bay of Quinté Railway, including— Kingston, Napanee & Western	93·37	.....	.....	172,496	172,496
5	Bedlington and Nelson	15·30	.....	264	1,892	2,156
6	British Yukon	90·32	270	17,352	55,422	73,044
7	Brockville, Westport and Northwestern	45·00	29,728	1,316	15,030	46,074
8	Bruce Mines and Algoma	16·62	.....	.....	5,400	5,400
9	Buctouche and Moncton	32·00	.....	.....	18,368	18,368
10	Calgary and Edmonton	296·20	31,012	76,286	17,144	124,442
11	Canada Atlantic, including Ottawa, Arnprior and Parry Sound 400·30; Leased lines—Central Counties 37·40, Pembroke Southern 20·90	458·60	454,967	717,717	140,953	1,313,637
12	Canada Coals & Ry. Co., formerly Joggins	12·00	15,024	.....	6,365	21,389
13	Canada Eastern	136·00	93,274	45,875	30,981	170,130
14	Canada Southern 359·24; Leased lines— Sarnia, Chatham and Erie 7·00; Leamington and St. Clair 15·95	382·19	1,416,220	1,964,504	134,067	3,514,791
15	Canadian Northern, including Winnipeg Great Northern, Port Arthur, Duluth and Western, Manitoba & South Eastern, Lake Manitoba Railway and Canal Co.'s line, Ontario and Rainy River, Manitoba (formerly Northern Pacific and Manitoba, and Portage and North Western Rys.) operated by Canadian Northern	998·65 / 354·65	645,253	1,052,733	.....	1,697,986
	Canadian Government Railways—					
16	Intercolonial, exclusive of Windsor Branch, 32 miles, but including Drummond County	1,310·26	2,612,180	.....	3,891,399	6,503,579
17	Prince Edward Island	209·00	134,686	.....	176,099	310,785
18	Canadian Pacific Ry. 4,742·40; Leased lines— Calgary and Edmonton 296·20; Fredericton 22·10; New Brunswick 174·80; New Brunswick & Canada 117·20; St. John and Maine 91·80; St. John Bridge and Ry. Extension 2·00; St. Stephen and Milltown 4·60; Tobique Valley 28·00; Cap de la Madeleine 2·30; Montreal and Lake Maskinongé 11·00; Atlantic and North-west 200·70; Montreal and Ottawa 93·50; Ontario and Quebec 471·40; St. Lawrence and Ottawa 58·30; Credit Valley 175·70; Guelph Junction 15·00; Toronto, Hamilton and Buffalo 2·20; Toronto, Grey and Bruce 191·10	8,062·00	8,652,143	13,394,598	1,463,398	23,510,139

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Year and Mileage for the Year ended June 30, 1904.

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passenger Trains—Miles per Hour.	Average Rate of Speed of Freight Trains—Miles per Hour.	Average Weight of Passenger Trains in Motion—Tons.	Average Weight of Freight Trains in Motion—Tons.	Number.	Remarks.
127,798	14,304	79,356	.....	18	.... .	500	1	
119,975	16,032	294,484	20	15	85	660	2	
65,000	14,416	26,957	25	20	125	150	3	
172,496	102,258	300,845	.....	.....	.....	...	4	
2,180	887	448	.....	.....	.. ..	...	5	Also running powers over C.P.R.
73,932	11,264	32,361	.....	... ...	....	.....	6	from Creston Jct. to Sirdar
46,074	59,457	17,899	22	18	.....	.....	7	Jct., 8·67 miles.
5,400	7,012	22,120	*18	.....	.....	...	8	*Mixed trains.
19,836	11,382	23,518	....	16	..	.....	9	
148,808	32,975	48,019	22	15	... ..	...	10	Returns up to Sept. 30, 1903, only, company then operated, &c., by C.P.R.
1,741,073	411,385	1,324,913	30	15	275	1,180	11	
28,389	11,139	80,666	20	20	250	270	12	
170,130	58,169	85,944	....	....	...	.....	13	
4,807,020	711,097	5,280,046	47	15	.....	.....	14	
1,776,782	358,133	1,109,585	28	15	325	374	15	
8,224,858	2,663,156	2,664,149	30	15	260	500	16	
406,007	224,567	86,286	22	16	....	.....	17	
32,019,394	6,224,177	11,112,514	35	20	246	670	18	Also running powers over— Grand Trunk Ry., Toronto to Hamilton Jct ..... 35·80 Canada Atlantic Ry., Montreal and Ottawa Jct. to Ottawa. ... 0·90 Total..... 36·70

No. 4.—Summary Statement of the Operations of the Year

Number.	Name of Railway.	Mileage.	Train Mileage.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
	Can. Pac.—Leased lines—*Con.*—					
	West Ontario Pacific .... 26·60					
	Manitoba and North-western..... 294·60					
	Manitoba South-western Colonization..... 215·70					
	Kootenay and Arrowhead. 33·40					
	Columbia and Kootenay... 59·50					
	Nakusp and Slocan..... 36·30					
	Shuswap and Okanagan... 50·80					
	Ottawa, Northern and Western ..... 158·70					
	Columbia and Western ... 157·10					
	Great North-west Central. 111·70					
	British Columbia Southern 200·40					
	Vancouver and Lulu Island 16·90					
19	Cape Breton Ry.	31·00	.....	.....	16,554	16,554
20	Caraquet.....	68·00	.....	.....	75,240	75,240
21	Carillon and Grenville	13·00	6,000	1.000	367	7,367
22	Central Ontario..... 125·00					
	Leased line—					
	Marmora Ry. and Mining Co., formerly Ontario, Belmont and Northern..... 9·60	134·60	17,640	18,490	93.200	129,330
23	Central Ry., Nova Scotia, formerly Nova Scotia Central, now Halifax and South-western	.....	.....	.....	.....	.....
24	Crow's Nest Southern.....	43·38	32	1,871	16,456	18,359
25	Cumberland Railway and Coal Co.....	32·00	.....	.....	71,443	71,443
26	Dominion Atlantic, comprising—					
	Windsor and Annapolis. ..... 87·50					
	Cornwallis Valley .... 14·00					
	Yarmouth and Annapolis (Western Counties)..... 87·32	220·50	222,006	.....	344,620	566,626
	Windsor Branch, leased from Intercolonial .... 32·00					
27	Edmonton, Yukon and Pacific.....	4·50	.....	.....	6,850	6,850
28	Elgin and Havelock.....	28·00	.....	.....	14,996	14,996
29	Esquimalt and Nanaimo	78·00	171,994	112,290	.....	284,284
30	Fredericton and St. Mary's Ry. Bridge Co.	1·33	.....	.....	.....	.....
31	Grand Trunk..... 880·35					
	Wharf Branch, Montreal . 3·44					
	Great Western..... 561·80					
	Brantford, Norfolk and Port Burwell..... ..... 34·39					
	Buffalo and Lake Huron ..... 162·00					
	Grand Trunk, Georgian Bay and Lake Erie ..... 175·62					
	Owen Sound Branch..... 12·42					
	London, Huron and Bruce.... 68·00					
	Waterloo Junction..... .. 10·25					
	South Norfolk .... 17·00					
	Wellington, Grey and Bruce.. 168·18					
	Northern ..... 172·10	3,143·60	6,890,121	9,261,556	704,029	16,855,706
	North Simcoe .... 33·00					
	Hamilton and North-western. 172·00					
	Northern Pacific Junction .... 111·32					
	Toronto Belt Line ..... 12·79					
	Midland..... 166·00					
	Grand Junction , ... 85·21					
	Toronto and Nipissing ..... 85·00					
	Lake Simcoe Junction ..... 26·00					
	Victoria..... . ... 53·00					

and Mileage for the Year ended June 30, 1904—*Continued.*

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passenger Trains—Miles per Hour.	Average Rate of Speed of Freight Trains—Miles per Hour.	Average Weight of Passenger Trains in Motion—Tons.	Average Weight of Freight Trains in Motion.	Number.	Remarks.
16,982	5,279	3,742	20	.....	..	....	19	
75,240	8,009	22,055	15	15	..	....	20	
7,887	6,421	80	30	21	75	60	21	
176,020	105,540	207,088	25	20	250	800	22	
.....	.....	.....	.....	.....	.....	.....	23	In Halifax and South-western return.
24,208	2,594	61,320	...	...	...	...	24	
139,624	36,673	456,159	30	20	....	..	25	
566,626	303,716	306,556	30	15	100	200	26	Also running powers over Intercolonial from Halifax to Windsor Junction, 14 miles.
6,850	17,487	31,706	20	.... ..	.....	395	27	
14,996	6,882	8,523	15	.....	.....	.....	28	
284,284	183,156	192,112	25	20	...	.....	29	
.....	.....	.....	.....	.....	...	.....	30	Also running powers over Canada Eastern Ry., 0·17 miles.
21,856,461	8,376,140	11,668,672	34	18	225	675	31	Also running powers over Chaudière Branch of Intercolonial Ry., 5·77 miles.

No. 4.—Summary Statement of the Operations of the Year

Number.	Name of Railway.	Mileage.	Train Mileage.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
	Grand Trunk—*Con.*					
	Whitby, Port Perry & Lindsay 46·00					
	Jacques Cartier Union 6·50					
	Montreal & Champlain Junction 61·73					
	Beauharnois Junction 19·50					
32	Great Northern Railway of Canada, including Lower Laurentian and Montford & Gatineau Colonization Railway.	208·10	117,586	80,679	61,704	259,969
33	Gulf Shore	16·78			5,300	5,300
34	Halifax and Yarmouth	50·20	18,500		29,600	48,100
35	Halifax and South-western, formerly Nova Scotia Southern	96·00	1,174		58,163	59,337
36	Hampton and St. Martins	29·00			10,800	10,800
37	Hereford	53·30	17,699	48,360		66,059
38	Inverness Railway and Coal Co., formerly Inverness and Richmond	61·00		48,961	38,404	87,365
39	Irondale, Bancroft and Ottawa	48·00	860		31,926	32,786
40	Kaslo and Slocan	31·80	62		20,175	20,237
41	Kent Northern (St. Louis and Richibucto)	27·00			18,000	18,000
42	Kettle River Valley	3·86			2,485	2,485
43	Kingston and Pembroke	112·85	67,015	5,241	92,496	164,752
44	Lake Erie and Detroit River, including Erie and Huron 199·41					
	Leased line—London and Port Stanley 24·00	223·41	348,263	296,520	152,004	796,787
45	Lenora and Mount Sicker	11·50			15,050	15,050
46	Liverpool and Milton	5·00			8,300	8,300
47	Lotbinière and Mégantic	30·34			20,200	20,200
48	Manitoulin and North Shore	16·00	306	5,050	5,938	11,294
49	Massawippi Valley	35·46	71,049	73,824	20,211	165,084
50	Midland of Nova Scotia	57·87	72,616		35,612	108,228
51	Montreal and Atlantic, formerly South-eastern 103·00					
	Lake Champlain and St. Lawrence Junction 60·50	163·50	88,505	158,688	124,931	372,124
52	Montreal and Province Line, formerly Montreal, Portland and Boston	58·60	18,273	15,547	46,100	79,920
53	Montreal and Vermont Junction	23·60	64,170	79,208		143,378
54	Morrissey, Fernie and Michel, B.C	4·73	5,903	11,700		17,603
55	New Westminster Southern	24·10	17,688	156	7,699	25,543
56	Nelson and Fort Sheppard	55·42			43,940	43,940
57	New Brunswick Coal and Railway Co., formerly Central of N.B.	44·66			25,470	25,470
58	New Brunswick & Prince Edward Island	37·50	2,510	13,672	21,320	36,902
59	Nosbonsing and Nipissing	5·50	15,325			15,325
60	New Brunswick Southern, formerly Shore Line	82·50			55,536	55,536
61	Nova Scotia Steel and Coal Co.'s Ry	12·50			15,000	15,000
62	Orford Mountain	26·50	17,596	7,248	10,358	35,202
63	Ottawa, Northern and Western 158·70		33,350	6,878	20,180	60,408
64	Ottawa and New York	56·79	75,658	32,493		108,151
65	Philipsburg Railway and Quarry Co.'s Ry.	7·50		726		726
66	Qu'Appelle, Long Lake & Saskatchewan	253·96		100,115	129,440	229,555
67	Quebec Central	213·50	167,400	152,873	305,290	625,563
68	Quebec and Lake St. John	240·00	185,768	143,342	30,122	359,232
69	Quebec Ry., Light and Power Co., formerly Quebec, Montmorency & Charlevoix	30·00	23,668		15,650	39,318

and Mileage, for the Year ended June 30, 1904—*Continued.*

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passenger Trains—Miles per Hour.	Average Rate of Speed of Freight Trains—Miles per Hour.	Average Weight of Passenger Trains in Motion—Tons.	Average Weight of Freight Trains in Motion—Tons.	Number.	Remarks.
338,915	145,039	286,671	28	19	134	525	32	
5,300	710	8,714	.....	15	.....	200	33	
50,315	51,477	9,540	25	17	90	....	34	
92,348	62,746	41,328	20	.....	.....	.....	35	
10,800	3,749	3,732	15	15	.....	.....	36	From 1903 return. No return
66,059	21,883	133,892	26	15	.....	.....	37	received this year.
91,733	21,052	194,021	*20	14	*150	450	38	*Mixed trains.
33,000	8,673	21,928	25	18	125	160	39	
34,716	6,698	10,270	12	12	70	137	40	
18,250	7,110	18,049	18	.....	.....	.....	41	
2,485	1,447	33,810	.....	*15	.....	115	42	*Mixed trains.
165,532	43,570	99,620	25	18	.....	....	43	
1,110,641	609,265	1,339,966	35	25	.....	.....	44	
15,050	725	1,307	6	6	.....	.....	45	From 1903 return. No return
8,300	25,160	22,678	8	.....	.....	.....	46	received this year.
25,000	10,440	29,109	.....	20	.....	120	47	
16,788	3,205	134,333	20	15	45	305	48	
227,449	136,077	353,039	25	12	.....	.....	49	Also running powers over Grand
108,228	55,612	33,867	33	20	102	210	50	Trunk Ry., Lennoxville to Sherbrooke, 2·95 miles.
536,621	211,546	844,123	30	18	178	454	51	
90,884	108,475	78,785	30	12	.....	.....	52	
150,591	101,874	964,856	40	15	.....	.....	53	
18,560	7,250	135,743	12	12	110	305	54	
26,693	22,203	24,844	.....	.....	.....	.....	55	
48,531	20,523	31,500	.....	.....	.....	.....	56	Also running powers over C. P. R., Five Mile Point to Nelson, B.C., 4·70 miles.
25,470	3,674	5,200	.....	.....	.....	.....	57	Taken from 1903 report. Return
44,590	18,759	33,021	20	15	.....	.....	58	received this year too late
16,857	.....	28,606	.....	20	.....	.....	59	for entry.
55,536	14,276	22,596	20	.....	.....	.....	60	
35,000	7,367	145,321	.....	15	.....	300	61	
35,202	7,446	36,439	25	18	.....	.....	62	
60,438	58,416	20,669	30	25	.....	.....	63	Returns up to Oct. 31, 1903 only.
108,151	106,216	60,059	.....	35	18	.....	64	then C. P. Ry. leased line.
726	.....	4,608	.....	15	.....	.....	65	
278,834	40,141	123,364	*18	15	*231	366	66	*Mixed.
636,346	221,795	433,759	25	15	.....	.....	67	Also running powers over Inter-
518,967	247,905	318,730	28	15	150	550	68	colonial from Harlaka Jct. to Lévis, 5·00 miles.
39,668	155,980	35,313	21	18	220	250	69	

No. 4.—Summary Statement of the Operations of the Year

Number.	Name of Railway.	Mileage.	Train Mileage.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
70	Quebec Southern, comprising the United Counties, East Richelieu Valley and South Shore Railways	143·50	90,646	42,898	101,386	234,930
71	Red Mountain	9·59	6,308	10,307		16,615
72	Rutland and Noyan	3·39				
73	Salisbury and Harvey	45·00			24,742	24,742
74	Schomberg and Aurora	15·00	10,000			10,000
75	Stanstead, Shefford and Chambly	43·00	27,469	10,351	32,777	70,597
76	St. Clair Tunnel, Yard and Approaches	2·25				
77	St. Lawrence and Adirondack	32·82	106,640	49,473	17,280	173,393
78	St. Mary's River	47·00		27,247	10,220	37,467
79	Sydney and Louisbourg, (Dom. Coal Co.)	48·67	36,428	18,569	151,236	206,233
80	Témiscouata	113·00	72,814	11,800	70,964	155,578
81	Tilsonburg, Lake Erie and Pacific	35·33	38,080		17,040	55,120
82	Thousand Islands	6·33			36,014	36,014
83	Toronto, Hamilton and Buffalo	87·78	209,254	122,971	13,320	345,545
84	Vancouver, Victoria and Eastern Railway and Navigation Co.	16·50	112	210	13,164	13,486
85	Victoria and Sidney, B.C.	16·26	15,156		11,268	26,424
86	Victoria Terminal Railway and Ferry Co.	18·40	1,095		25,500	26,645
87	Wellington Colliery Co., B.C.	10·75		12,900	8,396	21,296
88	York and Carleton	5·75			700	700
		19,430·99	23,502,876	28,278,310	9,530,816	61,312,002

and Mileage, for the Year ended June 30, 1904—*Concluded.*

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passenger Trains—Miles per Hour.	Average Rate of Speed of Freight Trains—Miles per Hour.	Average Weight of Passenger Trains in Motion—Tons.	Average Weight of Freight Trains in Motion—Tons.	Number.	Remarks.
236,011	78,309	141,755					70	Taken from 1903 return. No return received this year.
30,849	14,391	239,614	12	10			71	
							72	Operated by Rutland Ry. Co. of U. S.
30,729	12,775	35,780	18		125		73	
10,000	4,320		20				74	
86,840	143,191	1,049,961	30	12			75	
98,708							76	
184,584	249,835	312,355	30	15	140	1,500	77	Also running powers over Grand Trunk Ry. from Valleyfield to Beauharnois, 13·30 miles.
45,030	8,321	29,420		12		170	78	
556,027	48,549	3,152,027	24	15	160	900	79	
155,578	53,863	90,636	26	17	187	330	80	Also running powers over Canadian Pacific Ry. from Adirondack Junction to Montreal, 8·70 miles.
55,120	26,200	25,709	35	25			81	
36,014	46,801	30,599					82	
620,083	281,628	1,026,945	35	20	125	1,000	83	
14,522	17,383	15,013					84	
26,424	41,694	23,633	18	*12	130	*210	85	*Mixed.
26,645	53,038	33,108	20		130		86	
21,296	3,776	216,231	20	20			87	
700	4,500	3,200	20				88	
80,508,064	23,640,765	48,097,519						

No. 5.—Summary Statement of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
1	Alberta Railway and Coal Co.	66·72	20,860	2,086	215,942	4,319	6,093
2	Algoma Central and Hudson Bay	91·75			52,118	886	571
3	Atlantic & Lake Superior, comprising— Baie des Chaleurs 100·00; Great Eastern, not under traffic 23·00; Ottawa Valley " " 7·00	100·00	7,600	760	15,500	305	273
4	Bay of Quinté, including— Kingston, Napanee & Western	93·37	20,640	2,064	79,842	2,207	6,892
5	Bedlington and Nelson	15·30					
6	British Yukon	90·32	5,143	514	199,568	3,193	10,499
7	Brockville, Westport & North-western	45·00	13,637	1,369	98,279	2,886	16,380
8	Bruce Mines and Algoma	16·62					110
9	Buctouche and Moncton	32·00				3,524	
10	Calgary and Edmonton 296·20		8,291	829	106,089	1,892	18,813
11	Canada Atlantic, including Ottawa, Arnprior & Parry Sound 400·30; Leased lines— Central Counties 37·40; Pembroke Southern 20·90	458·60	576,168	57,617	14,556,423	363,911	75,939
12	Canada Coals & Ry. Co., formerly Joggins	12·00	1,799	179	13,334	240	1
13	Canada Eastern	136·00	78,400	7,840	147,600	2,460	450
14	Canada Southern 359·24; Leased lines— Sarnia, Chatham & Erie 7·00; Leamington & St. Clair 15·95	382·19	1,670,129	164,092	27,044,789	573,639	1,491,482
15	Canadian Northern, including— Winnipeg Great Northern, Port Arthur, Duluth and Western Ry., Manitoba South Eastern, Lake Manitoba Ry. and Canal Co's Line, Ontario and Rainy River	998·65	141,107	14,110	9,992,195	293,581	25,188
	Manitoba (formerly Northern Pacific and Manitoba and Portage and North Western Rys.) operated by Canadian Northern	354·65					
16	Canadian Government Railways— Intercolonial, exclusive of Windsor Branch, 32 miles, but including Drummond County	1,310·26	1,607,050	160,705	2,788,772	59,764	113,006
17	Prince Edward Island	209·00	20,314	2,032	832,891	14,304	19,485
18	Canadian Pacific Ry. 4,742·40; Leased lines— Calgary, Edmonton 296·20; Fredericton 22·10; New Brunswick 174·80; New Brunswick & Canada 117·20; St. John and Maine 91·80; St. John Bridge and Railway Extension 2·00; St. Stephen and Milltown 4·60; Tobique Valley 28·00; Cap de la Madeleine 2·30; Montreal & L. Maskinongé 11·00; Atlantic and North-west 200·70; Montreal and Ottawa 93·50; Ontario and Quebec 471·40; St. Lawrence and Ottawa 58·30; Credit Valley 175·70	8,062·00	5,268,772	526,878	52,962,829	1,396,601	1,312,490

Freight carried for the Year ended June 30, 1904.

Stock.	Lumber of all kinds, ft. B.M.	Coal and other Fuel.		Manufactured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
2,663	3,905,130	5,858		33,817	5,609	25,004	79,356	1
499	1,425,000	2,495	10,500	21,649	3,681	265,274	294,484	2
155	9,215,000	11,479	102	158	7,699	6,410	26,957	3
2,757	33,906,286	59,336		41,376	104,232	88,873	300,845	4
				363		85	448	5
3,309	515,267	772		284	16,527	7,762	32,361	6
1,892	716,849	1,033		807	7,816	2,096	17,899	7
37		15,235		850	353	5,645	22,120	8
		5,524	481	8,132		6,338	23,518	9
7,799	8,992,320	11,693		532	13,945	11,329	48,019	10 Returns up to Sept. 30, 1903. Then in. C.P.Ry.
18,985	296,140,900	407,193		151,491	130,549	195,167	1,324,913	11
1	622,500	810		76,286	2,869	281	80,666	12
225	28,000,000	28,000		11,700	10,400	25,319	85,944	13
245,612	176,660,746	271,640	8,550	14,604	1,274,661	2,735,798	5,280,046	14
8,986	117,517	176,277	171,714	240,386	262,973	113,272	1,109,585	15
24,709	465,379,803	622,885		784,021	522,410	489,655	2,664,149	16
3,133	3,618,060	5,580		9,102		52,135	86,286	17
355,058	1,257,487,083	1,674,635		1,742,230	3,112,693	2,304,419	11,112,514	18

No. 5.—Summary Statement of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
	Can. Pac.—Leased lines *Con.*						
	Guelph Junction	15·00					
	Toronto, Hamilton & Buffalo	2·20					
	Toronto, Grey and Bruce	191·10					
	West Ontario Pacific	26·60					
	Manitoba & North-west'rn	294·60					
	Manitoba South-western Colonization	215·70					
	Kootenay and Arrowhead	33·40					
	Columbia and Kootenay	59·50					
	Nakusp and Slocan	36·30					
	Ottawa, North'n & West'rn	158·70					
	Shuswap and Okanagan	50·80					
	Columbia and Western	157·10					
	Great North-west Central	111·70					
	B. Columbia Southern	200·40					
	Vancouver & Lulu Island	16·90					
19	Cape Breton Ry	31·00	348	34			13
20	Caraquet	68·00	9,500	950		500	400
21	Carillon and Grenville	13·00					70
22	Central Ontario	125·00					
	Marmora Ry. and Mining Co., formerly Ontario, Belmont and Northern	9·60	134·60	18,817	1,844	231,780	5,794	8,900
23	Central of Nova Scotia (formerly Nova Scotia Central, now Halifax and South-western							
24	Crow's Nest Southern	43·38	133	33	1,125	18	445
25	Cumberland Ry. and Coal Co.	32·00	11,513	1,151	47,932	814	99
26	Dominion Atlantic, comprising—						
	Windsor and Annapolis	87·50					
	Cornwallis Valley	14·00					
	Yarmouth and Annapolis (Western Counties)	87·00	220·50	160,275	16,027	4,072	11,009
	Windsor Branch, leased from Intercolonial	32·00					
27	Edmonton, Yukon and Pacific	4·50	16,455	1,646	142,862	2,712	205
28	Elgin and Havelock	28·00	3,809	389	2,846	48	2,870
29	Esquimalt and Nanaimo	78·00	46,910	4,691	94,500	2,835	4,319
30	Fredericton and St. Mary's Railway Bridge Co.	1·33					
31	Grand Trunk	880·35					
	Wharf Branch, Montreal	3·44					
	Great Western	561·80					
	Brantford, Norfolk and Port Burwell	34·39					
	Buffalo and Lake Huron	162·00					
	Grand Trunk, Georgian Bay and Lake Erie	175·62					
	Owen Sound Branch	12·42					
	London, Huron and Bruce	68·00					
	Waterloo Junction	10·25					
	South Norfolk	17·00					
	Wellington, Grey and Bruce	168·18					
	Northern	172·10					
	North Simcoe	33·00	3,143·60	4,005,770	400,577	45,142,760	1,128,569	3,800,560
	Hamilton & North-western	172·00					
	Northern Pacific Junction	111·32					
	Toronto Belt Line	12·79					
	Midland	166·00					
	Grand Junction	85·21					

Freight carried for the Year ended June 30, 1904—*Continued.*

Stock.	Lumber of all kinds, ft. B.M.		Coal and other Fuel.		Manufactured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.	Tons.		
62		51		539		3,056	3,742	19	
200		16,500		500	3,000	405	22,055	20	
30					15	35	80	21	
4,450	9,071,200	11,339		95,814	75,871	11,976	207,088	22	
								23	Now Halifax and South-western Ry.
244	2,423,000	3,634		52,693	3,168	1,530	61,320	24	
50	8,500,000	15,010		426,321	12,813		456,159	25	
2,742	45,803,100	68,705		28,230	45,110	141,670	306,556	26	
200	4,232,840	6,350			11,863	8,935	31,706	27	
287	3,796,600	4,661	269	538	1,565	1,035	8,523	28	
660	22,933,594	32,654		25,758	37,282	88,232	192,112	29	
								30	
760,112	837,528,000	1,675,056		4,717,407	1,612,600	1,374,351	11,668,672	31	

No. 5.—Summary Statement of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
	Grand Trunk—*Con.*						
	Toronto and Nipissing..... 85·00						
	Lake Simcoe Junction..... 26·00						
	Victoria..... 53·00						
	Whitby, Port Perry and Lindsay..... 46·00						
	Jacques Cartier Union..... 6·50						
	Montreal and Champlain Junction..... 61·73						
	Beauharnois Junction..... 19·50						
32	Great Northern Ry. of Canada, including Lower Laurentian, Montford, Gatineau Colonization Railway.....	208·10	99,700	9,970	251,960	6,299	196
33	Gulf Shore.....	16·78	3,000	300	2,000	34	20
34	Halifax & South-western (formerly Nova Scotia Southern).....	96·00	18,892	1,889	6,733	111	207
35	Halifax and Yarmouth.....	50·20	11,299	1,130	27,758	694	115
36	Hampton and St. Martin's.....	29·00	.....	.....	.....	.....	.....
37	Hereford.....	53·30	12,130	1,213	54,426	1,306	8,037
38	Inverness Ry. and Coal Co., (formerly Inverness and Richmond).....	61·00	14,549	1,454	7,636	132	460
39	Irondale, Bancroft and Ottawa.....	48·00	4,140	414	11,250	225	1,325
40	Kaslo and Slocan.....	31·80	420	42	4,166	125	.....
41	Kent Northern (St. Louis and Richibucto not in operation).....	27·00	5,108	520	6,466	122	99
42	Kettle River Valley.....	3·86	958	99	.....	.....	453
43	Kingston and Pembroke.....	112·85	8,112	795	80,800	5,555	1,110
44	Lake Erie and Detroit River, including Erie & Huron..199·41 Leased line—London & Pt. Stanley..... 24·00	223·41	.....	34,435	.....	103,378	.....
45	Lenora Mount Sicker.....	11·50	.....	.....	.....	.....	.....
46	Liverpool and Milton.....	5·00	.....	.....	.....	.....	.....
47	Lotbinière and Mégantic.....	30·34	7,695	769	4,706	80	11
48	Manitoulin and North Shore.....	16·00	.....	.....	.....	.....	.....
49	Massawippi Valley.....	35·46	15,610	1,561	666,350	13,327	12,227
50	Midland of Nova Scotia.....	57·87	6,635	663	44,254	752	511
51	Montreal and Atlantic, (formerly South-Eastern)..103·00 Lake Champlain and St. Lawrence Junction..... 60·50	163·50	1,089,744	108,975	5,328,699	117,879	22,425
52	Montreal and Province Line (formerly Montreal, Portland and Boston).....	58·60	10,240	1,024	47,285	1,351	896
53	Montreal and Vermont Junction.....	23·60	406,680	40,668	6,645,450	189,870	127,836
54	Morrissey, Fernie and Michel, B.C.....	4·73	.....	.....	.....	.....	.....
55	New Westminster Southern.....	24·10	980	98	9,072	254	2,210
56	Nelson and Fort Sheppard.....	55·42	340	34	10,322	310	.....
57	New Brunswick Coal and Ry. Co. (formerly Central of New Brunswick)	44·66	970	97	3,493	59	.....
58	New Brunswick and Prince Edward Island.....	37·50	10,419	1,051	36,255	559	1,976
59	Nosbonsing and Nipissing.....	5·50	.....	.....	.....	.....	.....
60	New Brunswick Southern.....	82·50	2,146	214	23,570	488	42
61	Nova Scotia Steel & Coal Co.'s Ry.....	12·50	1,124	112	14,250	243	61
62	Orford Mountain.....	26·50	14,362	1,436	17,713	361	2,210
63	Ottawa, Northern and Western including Pontiac. Pacific Jct. Ry. and Interprovincial Bridge 158·70.....	.....	13,964	1,396	23,109	518	7,259
64	Ottawa and New York.....	56·79	3,720	372	48,933	1,468	2,898
65	Philipsburg Ry. and Quarry Co.....	7·56	.....	.....	.....	.....	.....

Freight carried for the Year ended June 30, 1904—*Continued.*

Stock.	Lumber of all kinds, ft. B.M.	Coal and other Fuel.		Manufactured Goods.	All other Articles.	Total Weight Carried	Number.	Remarks.
Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
98	32,129,838	48,243	.....	46,127	78,745	97,189	286,671	32	
10	6,000,000	6,600	30	45	1,725	.....	8,714	33	
80	8,739,000	13,238	.....	7,891	13,172	4,947	41,328	34	
66	1,548,354	2,323	.....	1,861	1,351	2,115	9,540	35	
.....	2,364,000	2,953	21	37	.....	742	3,732	36	Taken from 1903 report. No return received this year.
1,009	69,820,644	104,731	.....	5,066	10,530	10,037	133,852	37	
185	2,386,824	3,978	.....	182,825	98	5,349	194,021	38	
331	1,600,000	2,400	.....	11,346	3,159	4,053	21,928	39	
.....	485,000	884	.....	2,552	605	6,062	10,270	40	
22	285,000	285	.....	857	2,539	13,704	18,049	41	
116	1,435,000	2,866	520	1,038	430	29,261	33,810	42	
555	13,110,000	19,665	.....	16,055	50,995	6,000	99,620	43	
34,699	.....	64,577	.....	481,004	116,285	505,588	1,339,966	44	
.....	525,000	787	.....	.....	520	.....	1,307	45	Taken from 1903 report. No return received this year.
.....	.....	.....	.....	.....	.....	*22,678	22,678	46	*Includes 14,278 tons pulp; 7,000 tons pulp wood.
22	.....	9,175	.....	7,100	158	11,805	29,109	47	
.....	.....	123	.....	1,928	546	131,736	134,333	48	
1,587	98,112,000	134,910	.....	12,366	33,522	155,766	353,039	49	Bark, 8,944; wood pulp, 51,396; ore and copper, 40,868; stone and sand, 20,986.
220	10,733,856	18,784	.....	7,267	3,675	2,506	33,867	50	
5,053	75,687,678	105,256	.....	23,996	300,860	182,104	844,123	51	
224	12,431,556	18,666	.....	112	10,799	46,609	78,785	52	
31,959	3,773,088	57,168	.....	291	186,254	458,646	964,856	53	
.....	.....	.....	.....	130,299	.....	5,444	135,743	54	
152	369,000	554	.....	5,151	12,153	6,482	24,804	55	
.....	2,400,000	5,269	.....	97	.....	25,790	31,500	56	
.....	1,416,000	1,775	875	1,874	.....	1,395	5,200	57	Taken from 1903 return. Return received this year too late for entry.
195	8,760,000	17,540	881	2,200	3,296	8,180	33,021	58	
.....	20,433,000	28,606	.....	.....	.....	.....	28,606	59	
30	7,969,000	10,482	.....	427	7,943	3,012	22,594	60	
22	4,000,000	5,893	.....	40,900	535	97,616	145,321	61	
404	9,203,700	12,251	5,036	7,207	518	14,262	36,439	62	
1,067	2,880,000	3,133	180	269	9,559	4,427	20,669	63	Returns to Oct. 31, 1903 only. Then in C.P.R.
1,739	915,528	11,444	.....	12,447	5,359	27,230	60,059	64	
.....	.....	134	.....	.....	250	4,224	4,608	65	

No. 5.—Summary Statement of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
66	Qu'Appelle, Long Lake and Saskatchewan	253·96	13,490	1,349	1,339,969	37,805	23,966
67	Quebec Central	213·50	.....	17,429	.....	1,486	.....
68	Quebec and Lake St. John	240·00	49,866	4,986	903,922	18,078	3,011
69	Quebec Ry. Light & Power Co. (form'ly Quebec, Montmorency & Charlevoix).	30·00	9,951	994	15,156	438	344
70	Quebec Southern, comprising the United Counties, East Richelieu Valley and South Shore Rys	143·50	23,890	2,389	93,644	2,475	1,700
71	Red Mountain	9·59	.....	.....	.....	.....	120
72	Rutland and Noyan	3·39	.....	.....	.....	.....	.....
73	Salisbury and Harvey	45·00	3,121	312	40,405	686	346
74	Schomberg and Aurora	15·00	.....	.....	.....	.....	.....
75	Stanstead, Shefford and Chambly	43·00	464,080	46,408	7,515,235	214,721	114,484
76	St. Clair Tunnel, Yard and Approaches	2·25	.....	.....	.....	.....	.....
77	St. Lawrence and Adirondack	32·82	24,810	2,481	51,280	1,282	1,218
78	St. Mary's River	47·00	20,970	2,097	211,289	4,226	683
79	Sydney and Louisburg (Dominion Coal Co.)	48·67	2,550	255	3,000	51	92
80	Temiscouata	113·00	16,685	1,668	44,842	740	314
81	Tilsonburg, Lake Erie and Pacific	35·33	11,397	1,196	104,899	2,388	22,893
82	Thousand Islands	6 33	4,190	419	18,036	496	1,583
83	Toronto, Hamilton and Buffalo	87·78	51,119	5,101	604,495	15,619	81,265
84	Vancouver, Victoria and Eastern Ry. and Navigation Co.	16·50	.....	.....	.....	.....	520
85	Victoria and Sidney, B.C.	16·26	1,300	130	108,892	2,202	2,368
86	Victoria Terminal Ry. and Ferry Co.	18·40	1,624	163	209,959	3,648	2,420
87	Wellington Colliery Co., B.C.	10·75	1,030	103	8,500	231	326
88	York and Carleton	5·75	1,500	150	7,700	70	.....
		19,430·99	16,178,031	1,666,778	179,369,737	4,621,216	7,176,769

Freight carried for the Year ended June 30, 1904—*Concluded.*

Stock.	Lumber of all kinds, ft. B.M.		Coal and other Fuel.		Manufactured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.	Tons.		
14,291	17,297,846	21,559	5,415	8,123	24,636	15,601	123,364	66	
3,556	.....	70,682	.....	11,228	14,689	314,689	433,759	67	Including brick, pulp wood, pulp, butter and cheese, asbestos, stone, &c.
675	73,047,000	112,380	35,038	95,260	25,078	62,273	318,730	68	
164	1,154,206	1,732	7,243	8,720	5,521	17,744	35,313	69	
712	8,270,642	9,615	35,990	71,981	804	53,779	141,755	70	Taken from 1903 report. No return received this year.
78	1,450,000	2,878	.....	1,042	.....	235,616	239,614	71	
.....	.....	.....	.....	.....	.....	.....	.....	72	Operated by Rutland Ry. Co. of United States.
173	8,136,000	12,204	2,567	2,567	1,279	18,559	35,780	73	
.....	.....	.....	.....	.....	.....	.....	.....	74	
28,621	38,294,334	57,499	.....	490	182,773	519,449	1,049,961	75	
.....	.....	.....	.....	.....	.....	.....	.....	76	
609	38,324,667	57,487	.....	85,046	75,012	90,438	312,355	77	
299	3,170,143	4,755	.....	7,292	5,356	5,395	29,420	78	
46	6,258,000	55,740	.....	2,958,677	.....	137,258	3,152,027	79	
157	47,501,000	68,700	5,384	8,076	3,641	7,654	90,636	80	
2,866	2,254,396	6,428	.....	6,202	2,866	3,763	25,709	81	
653	2,724,571	4,768	.....	.....	15,156	9,107	30,599	82	
8,612	8,906,814	14,920	4,161	6,598	191,010	785,085	1,026,945	83	
282	96,000	133	.....	.....	.....	14,598	15,013	84	
346	417,575	618	5,729	10,391	6,107	3,839	23,633	85	
366	810,875	1,210	.....	10,391	11,611	5,719	33,108	86	
163	.....	.....	.....	213,591	1,715	428	216,231	87	
25	.....	1,224	180	240	.....	1,491	3,200	88	
1,587,396	3,877,997,870	6,353,621	300.866	13,002,138	8,702,839	12,163,531	48,097,519		

No. 6.—Summary Statement of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			$ cts.	$ cts.	$ cts.
1	Alberta Railway and Coal Co	66·72	26,927 89	70,078 26	1,919 77
2	Algoma Central and Hudson Bay	91·75	16,982 66	96,945 82	25 14
3	Atlantic and Lake Superior, comprising—				
	Baie des Chaleurs 100·00				
	Great Eastern, not under traffic 23·00	100·00	20,428 18	31,449 30	5,468 29
	Ottawa Valley " 7·00				
4	Bay of Quinte Railway, including— Kingston, Napanee and Western	93 37	32,896 10	181,309 35	8,548 46
5	Bedlington and Nelson	15·30	472 19	59 10	
6	British Yukon	90.32	70,291 38	264,709 10	7,859 59
7	Brockville, Westport and Northwestern	45·00	23,486 50	21,362 88	2,979 67
8	Bruce Mines and Algoma	16·62	2,045 40	2,543 18	73 15
9	Buctouche and Moncton	32·00	5,032 34	13,423 90	623 82
10	Calgary and Edmonton 296·20		80,527 10	142,062 41	6,305 68
11	Canada Atlantic, including Ottawa, Arnprior and Parry Sound 400·30	458·60	339,458 83	1,318,130 15	33,568 41
	Leased lines, Central Counties 37·40				
	Pembroke Southern 20·90				
12	Canada Coals and Railway Co., formerly Joggins	12·00	3,591 15	31,831 61	572 12
13	Canada Eastern	136·00	38,409 80	72,331 53	5,150 34
14	Canada Southern 359·24	382·19	1,221,156 61	4,772,416 80	343,030 24
	Leased, Sarnia, Chatham and Erie 7·00				
	Leamington and St. Clair 15·95				
15	Canadian Northern, including—				
	Winnipeg Great Northern				
	Port Arthur, Duluth and Western				
	Manitoba and South-eastern	988·65	516,808 11	2,412,383 51	42,666 00
	Lake Manitoba Ry. and Canal Co.'s line				
	Ontario and Rainy River				
	Manitoba (formerly Northern Pacific and Manitoba, and Portage and North-western Rys., operated by Canadian Northern	354·65			
16	Canadian Government Railways—				
	Intercolonial, exclusive of Windsor Branch, 32 miles, but including Drummond County	1,310·26	2,021,568 40	4,041,122 48	262,553 41
17	Prince Edward Island	209·00	102,378 49	114,061 59	17,522 95
18	Canadian Pacific Ry 4,742·40				
	Leased lines—				
	Calgary and Edmonton 296·20				
	Fredericton 22·10				
	New Brunswick 174·80				
	New Brunswick and Canada 117·20				
	St. John and Maine 91·80				
	St. John Bridge & Ry. Extension 2·00				
	St. Stephen and Milltown 4·60				
	Tobique Valley 28·00				
	Cap de la Madeleine 2·30				
	Montreal and Lake Maskinonge 11·00				
	Atlantic and North-west 200·70				
	Montreal and Ottawa 93.50				
	Ontario and Quebec 471·40	8,062·00	12,265,689 24	28,764,224 62	1,703,906 39
	St. Lawrence and Ottawa 58·30				
	Credit Valley 175·70				
	Guelph Junction 15·00				
	Toronto, Hamilton and Buffalo 2·20				
	Toronto, Grey and Bruce 191·10				
	West Ontario Pacific 26·60				
	Manitoba and North-western 294·60				
	Manitoba South-western Colonization 215·70				
	Kootenay and Arrowhead 33·40				

for the Year ended June 30, 1904.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	p. c.	$ cts.		
30,896 75	129,822 67	28,342 99	128	3 09	1	
46,053 66	160,007 28	34,301 24	127	5 31	2	
.....	57,345 77	11,662 98	125	0 88	3	
10,881 87	233,635 78	74,336 96	146	1 35	4	
5 73	537 02	– 8,821 27	6	0 25	5	Also running powers over C. P. R. from
6,671 38	348,991 45	170,031 02	195	4 77	6	Creston Jct. to Sirdar Jct., 8·67 miles.
602 20	48,431 25	17,638 59	157	1 05	7	
....	4,661 73	– 5,404 60	46	0 86	8	
....	19,080 06	– 1,681 73	92	1 04	9	
742 33	229,637 52	40,197 04	121	1 85	10	Returns up to Sept. 30, 1903. Then included in C. P. Ry.
70,142 68	1,761,300 07	423,611 47	133	1 34	11	
1,251 45	37,246 33	12,152 73	149	1 74	12	
1,020 92	116,912 59	1,422 56	101	0 69	13	
27,452 52	6,364,056 17	591,454 15	110	1 81	14	
270,845 07	3,242,702 69	1,121,930 26	153	1 91	15	
13,987 14	6,339,231 43	– 900,750 61	88	0 97	16	Also running powers over Grand Trunk—
427 00	234,390 03	– 101,305 41	70	0 75	17	Point Lévis to Hadlow. ..... 1·50
						Chaudière Curve to Chaudière... 1·18
						St. Rosalie Jct., to Montreal.... 37·62
						Total miles. ..... 40·30
3,056,752 17	45,790,572 42	14,308,290 69	145	1 95	18	Also running powers over—
						G. T. R., Toronto to Hamilton Jct.... ... . 35 80
						C. A. R., Montreal and Ottawa Jct. to Ottawa..... .... 0 90
						Total miles..... 36·70

No. 6.—Summary Statement of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			$ cts.	$ cts.	$ cts.
	Canadian Pacific—Leased lines—*Con.*				
	Columbia and Kootenay	59·50			
	Nakusp and Slocan	36·30			
	Shuswap and Okanagan	50·80			
	Ottawa, Northern and Western	158·70			
	Columbia and Western	157·10			
	Great North-west Central	111·70			
	British Columbia Southern	200·40			
	Vancouver and Lulu Island	16·90			
19	Cape Breton Ry	31·00	3,746 85	2,141 68	.....
20	Caraquet	68·00	7,457 85	24,232 20	1,965 00
21	Carillon and Grenville	13·00	1,848 55	88 38	.....
22	Central Ontario	125·00			
	Leased lines—				
	Marmora Ry. and Mining Co., formerly Ontario, Belmont & Northern	9·60	134·60	54,183 28	154,413 52	11,256 77
23	Central Ry., Nova Scotia (formerly Nova Scotia Central), now in Halifax South-western		.....	.....	.....	.....
24	Crow's Nest Southern		43·38	4,299 72	36,705 35	836 98
25	Cumberland Railway and Coal Co.		32·00	14,928 29	21,203 51	3,844 55
26	Dominion Atlantic, comprising—					
	Windsor and Annapolis	87·50			
	Cornwallis Valley	14·00			
	Yarmouth and Annapolis (Western Counties)	87·00	220·50	581,960 09	419,126 12	73,558 07
	Windsor Branch, leased from Intercolonial	32·00			
27	Edmonton, Yukon and Pacific		4·50	3,128 50	9,562 49	.....
28	Elgin and Havelock		28·00	2,271 11	6,309 48	662 48
29	Esquimalt and Nanaimo		78·00	105,871 67	159,641 06	3,906 24
30	Fredericton and St. Mary's Ry. Bridge Co.		1·33	1,216 44	3,142 43	.....
31	Grand Trunk	880·35			
	Wharf Branch, Montreal	3·44	883·79			
	Great Western		561·80			
	Brantford, Norfolk and Port Burwell		34·39			
	Buffalo and Lake Huron		162·00			
	Grand Trunk, Georgian Bay and Lake Erie		175 62			
	Owen Sound Branch		12·42			
	London, Huron and Bruce		68·00			
	Waterloo Junction		10·25			
	South Norfolk		17·00			
	Wellington, Grey and Bruce		168·18			
	Northern		172·10			
	North Simcoe		33·00	3,143·60	7,361,600 08	16,433,311 37	1,287,660 33
	Hamilton and North-western		172·00			
	Northern Pacific Junction		111·32			
	Toronto Belt Line		12·79			
	Midland		166·00			
	Grand Junction		85·21			
	Toronto and Nipissing		85·00			
	Lake Simcoe Junction		26·00			
	Victoria		53·00			
	Whitby, Port Perry and Lindsay		46·00			
	Jacques Cartier Union		6·50			
	Montreal and Champlain Junction		61·73			
	Beauharnois Junction		19·50			
32	Great Northern Railway of Canada, including Lower Laurentian and Montford and Gatineau Colonization Railway		208·10	65,906 20	224,292 71	4,263 90
33	Gulf Shore		16·78	448 51	4,787 95	.....

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for the Year ended June 30, 1904—*Continued.*

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	p. c.	$ cts.		
308 20	6,196 73	– 7,869 28	44	0 37	19	
1,533 70	35,188 75	– 7,584 00	82	0 46	20	
.....	1,936 93	– 1,909 38	50	0 26	21	
2,493 60	225,347 17	91,559 88	169	1 74	22	
....	.....	.....	.....	.....	23	
266 89	42,108 94	– 15,128 39	73	2 29	24	
81,999 40	121,975 75	20,714 05	120	1 70	25	
....	1,074,644 28	269,557 99	133	1 89	26	Also running powers over Intercolonial Ry., Halifax to Windsor Jct., 14·00 miles.
852 89	13,543 88	– 4,126 18	77	1 98	27	
372 75	9,615 82	– 2,709 53	78	0 64	28	
42,099 54	311,518 51	89,133 84	140	1 09	29	
500 00	4,858 87	3,427 34	.....	.....	30	Taken from 1903 return. Return received this year too late for entry.
704,391 36	25,786,963 14	8,072,704 81	145	1 53	31	
43,813 82	338,276 63	2,291 69	101	1 30	32	
....	5,236 46	2,364 81	182	0 99	33	

No. 6.—Summary Statement of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			$ cts.	$ cts.	$ cts.
34	Halifax and Yarmouth	50·20	26,523 59	11,328 33	1,357 10
35	Halifax and South-western (formerly Nova Scotia Southern)	96·00	42,437 93	32,476 96	4,392 82
36	Hampton and St. Martins	29·00	1,887 99	2,257 82	
37	Hereford	53·30	14,172 34	40,914 88	1,381 45
38	Inverness Railway and Coal Co., formerly Inverness and Richmond	61·00	20,521 26	113,038 51	404 00
39	Irondale, Bancroft and Ottawa	48·00	5,805 25	14,813 85	1,083 09
40	Kaslo and Slocan	31·80	7,881 40	15,358 94	1,356 26
41	Kent Northern	27·00	5,696 75	10,401 30	1,072 69
42	Kettle River Valley	3·86	229 63	5,130 87	0 80
43	Kingston and Pembroke	112·85	42,174 71	120,927 98	9,943 68
44	Lake Erie and Detroit River, including Erie and Huron 199·41; Leased, London and Port Stanley 24·00	223·41	215,484 98	760,395 51	32,648 25
45	Lenora Mount Sicker	11·50	399 75	6,535 00	
46	Liverpool and Milton	5·00	1,270 50	7,996 90	
47	Lotbinière and Mégantic	30 34	3,568 31	16,770 63	
48	Manitoulin and North Shore	16·00	1,710 85	27,811 63	
49	Massawippi Valley	35·46	58,229 09	95.235 26	3,471 66
50	Midland of Nova Scotia	57·87	33,146 79	31,007 71	530 86
51	Montreal and Atlantic, formerly Southeastern 103·00; Lake Champlain and St. Lawrence Junction 60·50	163·50	129.369 91	260,936 44	12.851 57
52	Montreal and Province Line, formerly Montreal, Portland and Boston	58·69	36,282 12	31,572 42	4,889 86
53	Montreal and Vermont Junction	23·60	55,569 01	127,183 84	5,088 00
54	Morrissey, Fernie and Michel, B.C.	4·73	1,087 45	23,762 10	13 17
55	New Westminster Southern	24·10	16,061 72	5,069 27	1,519 47
56	Nelson and Fort Sheppard	55·42	32,000 57	58,145 45	2,326 82
57	New Brunswick Coal and Railway Co. (formerly Central of N.B	44·66	2,194 94	3,257 44	1,106 56
58	New Brunswick and Prince Edward Island	37·50	7,658 39	15,241 24	1,285 13
59	Nosbonsing and Nipissing	5·50		49,040 64	
60	New Brunswick Southern (formerly Shore Line)	82 50	13,099 95	22,106 62	3,491 76
61	Nova Scotia Steel and Coal Co.'s Railway	12·50	1,675 50	10,128 07	
32	Orford Mountain	26·50	2,960 24	20,677 50	527 52
63	Ottawa, Northern and Western 158·70		35.829 60	33,022 86	3,214 83
64	Ottawa and New York	56·79	56,017 79	41,799 32	3,955 15
65	Philipsburg Railway and Quarry Co.'s Ry	7·50		1,258 01	
66	Qu'Appelle, Long Lake and Saskatchewan	253·96	120,369 15	278,898 03	9,105 12
67	Quebec Central	213·50	222,398 06	478,319 99	20,034 69
68	Quebec and Lake St. John	240·00	147,128 16	275,300 45	18,063 51
69	Quebec Railway, Light and Power Co. (formerly Quebec, Montmorency and Charlevoix	30·00	18,439 43	24,557 35	299 58
70	Quebec Southern, comprising United Counties, East Richelieu Valley and South Shore Rys	143·50	61,707 04	85,697 43	20,702 94
71	Red Mountain	9·59	4,557 90	51,465 97	875 31
72	Rutland and Noyan	3·39			
73	Salisbury and Harvey	45·00	8,227 17	17,132 76	2,574 92
74	Schomberg and Aurora	15·00	1,955 04	440 00	
75	Stanstead, Shefford and Chambly	43·00	22,298 39	49,965 08	4,485 50
76	St. Clair Tunnel, Yard and Approaches	2·25	39,861 50	178,723 66	*1,178 52
77	St. Lawrence and Adirondack	32·82	110,270 65	106,325 50	4,996 75
78	St. Mary's River	47 00	5,735 08	27,201 99	545 23
79	Sydney and Louisbourg (Dominion Coal Co.'s Ry)	48·67	20,567 97	604,360 28	2,947 89
80	Témiscouata	113·00	49,123 22	78,427 65	
81	Tilsonburg, Lake Erie and Pacific	35·33	9,867 20	16,880 96	1,612 79
82	Thousand Islands	6·33	7,261 22	18,630 68	3,275 08

for the Year ended June 30, 1904.—*Continued.*

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	p. c.	$ cts.		
675 22	39,884 24	9,530 13	131	6 82	34	
1,423 95	80,731 66	13,861 36	119	1 36	35	
115 89	4,261 70	44 45	101	0 39	36	Taken from last year's return. No return
71 00	56,539 67	– 29,054 06	66	0 85	37	received this year.
1,336 85	135,300 62	37,483 42	138	1 55	38	
.....	21,702 19	– 3,429 88	86	0 66	39	
86 90	24,683 50	– 18,480 31	57	1 22	40	
.....	17,170 74	3,605 84	126	0 95	41	
34 00	5,395 30	– 330 73	94	2 17	42	
10,029 52	183,075 89	33,564 98	122	1 11	43	
92 36	1,008,621 10	168,393 81	120	1 26	44	
.....	6,934 75	– 21,012 71	..	.....	45	Taken from 1903 return. No return re-
.....	9,267 40	3,288 08	155	1 12	46	ceived this year.
412 96	20,751 90	2,844 11	116	1 02	47	
732 79	30,255 27	9,941 08	149	2 68	48	
.....	156,936 01	35,553 64	130	0 95	49	Also running powers over G.T.R. from
629 56	65,314 92	15,151 73	130	0 60	50	Lennoxville to Sherbrooke, 2·95 miles.
8,882 24	412,040 16	– 54,271 88	88	1 11	51	
1,754 00	74,498 40	– 6,039 20	92	0 93	52	
250 00	188,090 85	70,420 96	159	1 31	53	
.....	24,862 72	3,284 63	115	1 41	54	
271 41	22,921 87	– 15,927 68	59	0 90	55	
343 51	92,816 35	– 4,195 06	95	2 11	56	Also running powers over C.P.R. from Five Mile Point to Nelson, B.C., 4·7 miles.
2,603 78	9,117 72	196 96*	..	.....	57	Taken from last years return. Return
92 50	24,277 26	6,505 65	136	0 65	58	received this year too late for entry.
.....	49,040 64	5,086 72	111	3 20	59	
207 05	38,905 38	– 3,761 03	91	0 70	60	
5,400 00	17,203 57	– 704 24	96	1 15	61	
.....	24,165 26	531 92	102	0 68	62	
15,119 07	87,186 36	19,314 87	128	1 44	63	Returns up to Oct. 31, 1903. Then in-
419 75	102,192 01	2,688 03	103	0 95	64	cluded in C.P.R.
3,668 81	4,926 82	1,948 94	165	6 78	65	
715 00	409,087 30	– 50,145 58	89	1 78	66	
5,896 48	726,649 22	215,874 50	142	1 16	67	Also running powers over I.C.R., Harlaka
37,502 42	477,994 54	151,432 07	146	1 33	68	Jct. to Lévis, 5·00 miles.
537 06	43,833 42	10,049 54	130	1 11	69	
545 96	168,653 37	– 17,177 65	.....	.....	70	Taken from 1903 report. No return re-
4,322 69	61,221 87	11,119 89	122	3 68	71	ceived this year.
.....	.....	.....	..	.....	72	Operated by Rutland Ry. Co. of U. S.
207 37	28,142 22	539 59	102	1 14	73	Traffic not returned.
.....	2,395 04	– 753 67	76	0 24	74	
350 00	77,098 97	22,417 31	141	1 09	75	
15 00	219,778 68	84,728 96	162	.....	76	The earnings of this company are from tolls on vehicles hauled through the tunnel.
134 37	221,727 27	90,872 98	169	1 27	77	Also running powers over—
2,713 49	36,195 79	16,448 42	183	0 96	78	G.T.R., Valleyfield to Beauhar-
37,547 04	665,423 18	276,789 32	171	3 22	79	nois..... 13·30
8,672 78	136,223 65	17,383 75	115	0 87	80	C.P.R., Adirondack Jct. to Mont-
.....	28,360 95	– 3,972 87	87	0 51	81	real..... 8·70
5,194 27	34,361 25	9,446 71	137	0 95	82	

No. 6—Summary Statement of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			$ cts.	$ cts.	$ cts.
83	Toronto, Hamilton and Buffalo	87·78	153,190 24	474,774 91	11,192 24
84	Vancouver, Victoria and Eastern Railway and Navigation Co.	16·50	8,255 47	18,750 88	383 07
85	Victoria and Sidney, B.C.	16·26	13,323 44	12,951 84	406 06
86	Victoria Terminal Railway and Ferry Co.	18·40	6,888 24	5,134 51	32 13
87	Wellington Colliery Co., B.C.	10·75	1,439 25	2,717 95	245 00
88	York and Carleton	5·75	1,047 00	2,194 00	66 00
	Total	19,430·99	26,901,831 64	64,673,919 01	4,031,662 58

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for the Year ended June 30, 1904—*Concluded*

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	p. c.	$ cts.		
34,154 57	673,311 96	224,051 18	149	1 94	83	
45 20	27,434 62	13,003 86	190	2 03	84	
47 89	26,729 23	– 2,477 00	92	1 00	85	
3 26	12,058 14	– 12,888 86	48	0 45	86	
.....	4,402 20	– 16,789 20	21	0 21	87	
.....	3,307 00	419 00	114	4 72	88	
4,612,022 99	100,219,436 22	25,656,274 49				

No. 7.—Summary Statement of Operating

Number.	Name of Railway.	Mileage.	Maintenance of Way, Buildings, &c.	Cost of Motive Power.
			$ cts.	$ cts.
1	Alberta Railway and Coal Co	66·72	30,927 43	23,468 53
2	Algoma Central and Hudson Bay	91·75	17,134 84	34,620 46
3	Atlantic and Lake Superior, comprising—			
	Baie des Chaleurs 100·00			
	Great Eastern, not under traffic 23·00	100·00	12,981 72	16,527 41
	Ottawa Valley " " 7·00			
4	Bay of Quinté Railway, including Kingston, Napanee and Western	93·37	27,370 92	66,540 75
5	Bedlington and Nelson	15·30	1,165 58	1,113 35
6	British Yukon	90·32	77,413 17	30,936 20
7	Brockville, Westport and North-eastern	45·00	7,190 31	8,335 68
8	Bruce Mines and Algoma	16·62	2,138 63	4,038 83
9	Buctouche and Moncton	32·00	8,938 34	5,089 04
10	Calgary and Edmonton 296·20		117,076 95	39,037 45
11	Canada Atlantic, including Ottawa, Arnprior and Parry Sound 400·30			
	Leased lines: Central Counties 37·40	458·60	301,407 53	540,420 56
	Pembroke Southern 20·90			
12	Canada Coals and Railway Co., formerly Joggins	12·00	7,000 95	11,091 15
13	Canada Eastern	136·00	36,511 80	44,803 92
14	Canada Southern 359·24			
	Leased lines: Sarnia, Chatham and Erie 7·00	382·19	875,487 49	1,560,545 68
	Leamington and St. Clair. 15·95			
15	Canadian Northern, including—			
	Winnipeg Great Northern	998·65		
	Port Arthur, Duluth and Western			
	Manitoba and South-eastern			
	Lake Manitoba Ry. and Canal Co.'s line		476,930 01	745,349 13
	Ontario and Rainy River			
	Manitoba (formerly Northern Pacific and Manitoba and Portage and North-western Rys. (operated by Canadian Northern	354·65		
16	Canadian Government Railways—			
	Intercolonial, exclusive of Windsor Branch, 32 miles, but including Drummond County	1,310·26	1,491,673 18	2,616,922 26
17	Prince Edward Island	209·00	103,826 40	115,474 46
18	Canadian Pacific 4,742·40			
	Leased lines: Calgary and Edmonton 296·20			
	Fredericton 22·10			
	New Brunswick 174·80			
	New Brunswick and Canada 117·20			
	St. John and Maine 91·80			
	St. John Bridge and Railway Extension 2·00			
	St. Stephen and Milltown 4·60			
	Tobique Valley 28·00			
	Cap de la Madeleine 2·30			
	Montreal and Lake Maskinongé 11·00			
	Atlantic and North-west 200·70			
	Montreal and Ottawa 93·50			
	Ontario and Quebec 471·40			
	St. Lawrence and Ottawa 58·30	8,062·00	6,719,995 40	10,558,983 26
	Credit Valley 175·70			
	Guelph Junction 15·00			
	Toronto, Hamilton and Buffalo 2·20			
	Toronto, Grey and Bruce 191·10			
	West Ontario Pacific 26·60			
	Manitoba and North-western 294·60			
	Manitoba and South-western Colonization 215·70			
	Kootenay and Arrowhead 33·40			
	Columbia and Kootenay 59.50			
	Nakusp and Slocan 36·30			
	Shuswap and Okanagan 50·80			
	Ottawa, Northern and Western 158·70			
	Columbia and Western 157·10			
	Great North-west Central 111·70			

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Expenses for the Year ended June 30, 1904.

Maintenance of Cars.	General and Operating Charges.	Total.	Cost of operating per train mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	$ cts.		
5,002 28	42,081 44	101,479 68	2 42	1	
10,593 24	63,357 50	125,706 04	4 17	2	
775 84	15,397 82	45,682 79	0 70	3	
13,851 44	51,535 71	159,298 82	0 92	4	
29 19	7,050 17	9,358 29	4 34	5	
7,316 78	63,294 23	178,960 43	2 45	6	
975 31	14,291 36	30,792 66	0 66	7	
277 50	3,611 37	10,066 33	1 86	8	
815 64	5,918 77	20,761 79	1 13	9	
5,873 50	27,452 58	189,440 48	1 52	10	Returns up to Sept. 30, 1903, only then in C. P. Ry.
126,464 35	369,396 16	1,337,688 60	1 01	11	
3,366 00	3,635 50	25,093 60	1 17	12	
5,112 42	29,061 89	115,490 03	0 68	13	
619,049 83	2,717,549 02	5,772,602 02	1 64	14	
126,471 89	772,021 40	2,120,772 43	1 25	15	
852,088 62	2,279,297 98	7,239,982 04	1 11	16	
16,974 81	99,419 77	335,695 44	1 08	17	
3,149,049 49	11,054,253 58	31,482,281 73	1 34	18	

No. 7.—Summary Statement of Operating Expenses

Number.	Name of Railway.	Mileage.	Maintenance of Way, Buildings, &c.	Cost of Motive Power.
			$ cts.	$ cts.
	Canadian Pacific—Leased lines—*Con.*			
	British Columbia Southern 200·40			
	Vancouver and Lulu Island 16·90			
19	Cape Breton Railway	31·00	4,254 31	3,752 25
20	Caraquet	68·00	11,203 06	13,762 44
21	Carillon and Grenville	13·00	1,419 25	1,721 00
22	Central Ontario 125·00			
	Marmora Ry. and Mining Co., formerly Ontario, Belmont and Northern 9·60	134·60	44,042 19	47,138 46
23	Central Ry. of Nova Scotia, formerly Nova Scotia Central, now Halifax and South-western			
24	Crow's Nest Southern	43·38	26,400 94	13,245 38
25	Cumberland Railway and Coal Company	32·00	36,472 02	30,930 69
26	Dominion Atlantic, comprising—			
	Windsor and Annapolis 87·50			
	Cornwallis Valley 14·00			
	Yarmouth and Annapolis (Western Counties) 87·00	220·50	169,650 18	302,710 50
	Windsor Branch, leased from Intercolonial 32·00			
27	Edmonton, Yukon and Pacific	4·50	5,254 10	5,021 90
28	Elgin and Havelock	28·00	5,727 69	2,838 24
29	Esquimalt and Nanaimo	78·00	57,751 60	39,918 94
30	Fredericton and St. Mary's Railway Bridge Co.	1·33	1,380 08	
31	Grand Trunk 880·35			
	Wharf Branch, Montreal 3·44			
	Great Western 561·80			
	Brantford, Norfolk and Port Burwell 34·39			
	Buffalo and Lake Huron 162·00			
	Grand Trunk, Georgian Bay and Lake Erie 175·62			
	Owen Sound Branch 12·42			
	London, Huron & Bruce 68·00			
	Waterloo Junction 10·25			
	South Norfolk 17·00			
	Wellington, Grey and Bruce 168·18			
	Northern 172·10			
	North Simcoe 33·00	3,143·60	3,369,260 64	6,811,947 75
	Hamilton and North-western 172·00			
	Northern and Pacific Junction 111·32			
	Toronto Belt Line 12·79			
	Midland 166·00			
	Grand Junction 85·21			
	Toronto and Nipissing 85·00			
	Lake Simcoe Junction 26·00			
	Victoria 53·00			
	Whitby, Port Perry and Lindsay 46·00			
	Jacques Cartier Union 6·50			
	Montreal and Champlain Junction 61.73			
	Beauharnois Junction 19·50			
32	Great Northern Ry. of Canada, including Lower Laurentian, Montford and Gatineau Colonization Railway	208·10	53,660 51	130,592 97
33	Gulf Shore	16·78	1,317 85	453 80
34	Halifax and South-western, formerly Nova Scotia Southern	96·00	24,830 50	21,640 18
35	Halifax and Yarmouth	50·20	9,067 15	10,603 30
36	Hampton and St. Martins	29·00	1,644 26	1,380 54
37	Hereford	53·30	29,999 29	28,949 84
38	Inverness Ry. and Coal Co., formerly Inverness and Richmond	61·00	22,973 29	34,872 36
39	Irondale, Bancroft and Ottawa	48·00	8,284 09	8,757 24
40	Kaslo and Slocan	31·80	23,227 20	6,520 75
41	Kent Northern (St Louis and Richibucto, not operated)	27·00	6,625 00	4,174 20
42	Kettle River Valley	3·86	3,344 04	1,127 34
43	Kingston and Pembroke	112·85	40,084 23	49,595 41
44	Lake Erie and Detroit River, including Erie and Huron 199·41			
	Leased lines—London and Port Stanley 24·00	223·41	111,776 77	350,379 18

for the Year ended June 30, 1904—*Continued.*

Maintenance of Cars.	General and Operating Charges.	Total.	Cost of operating per train mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	$ cts.		
27 03	6,032 42	14,066 01	0 85	19	
801 73	17,005 52	42,772 75	0 56	20	
350 00	356 06	3,846 31	0 52	21	
7,386 54	35,229 10	133,796 29	1 03	22	
.....	.....	.....	.....	23	Now Halifax and South-western.
5,044 53	12,546 48	57,237 33	3 11	24	
8,637 16	25,221 83	101,261 70	1 41	25	
24,552 79	308,172 82	805,086 29	1 42	26	
31 96	7,362 10	17,670 06	2 58	27	
1,059 01	2,700 41	12,325 35	0 82	28	
11,835 73	112,878 40	222,384 67	0 78	29	
.....	51 45	1,431 53	.....	30	Taken from 1903 return. No return received this year until too late for publication.
1,587,549 02	5,945,500 92	17,714,258 33	1 04	31	
22,675 36	129,056 10	335,984 94	1 29	32	
.....	1,100 00	2,871 65	0 54	33	
3,835 61	16,564 01	66,870 30	1 14	34	
1,685 38	8,998 28	30,354 11	0 63	35	
84 57	1,107 88	4,217 25	0 38	36	Taken from 1903 report. No return received this year.
3,778 04	22,866 56	85,593 73	1 30	37	
8,334 60	31,636 95	97,817 20	1 12	38	
781 59	7,309 15	25,132 07	0 76	39	
1,267 37	12,148 49	43,163 81	2 13	40	
65 00	2,700 70	13,564 90	0 75	41	
103 37	1,151 28	5,726 03	2 30	42	
5,670 51	54,160 76	149,510 91	0 91	43	
46,877 07	331,194 27	840,227 29	1·05	44	

No. 7.—Summary Statement of Operating Expenses

Number.	Name of Railway.	Mileage.	Maintenance of Way, Buildings, &c.	Cost of Motive Power.
			$ cts.	$ cts.
45	Lenora Mount Sicker	11·50	6,887 10	11,326 85
46	Liverpool and Milton	5·00	957 60	2,720 45
47	Lotbinière and Mégantic	30·34	6,696 70	6,481 31
48	Manitoulin and North Shore	16·00	3,349 93	9,243 11
49	Massawippi Valley	35·46	23,587 54	50,479 34
50	Midland of Nova Scotia	57 87	12,369 58	19,499 03
51	Montreal and Atlantic, formerly South Eastern...103·00 / Lake Champlain and St. Lawrence Junction.... 60·50	163·50	138,971 86	156,415 89
52	Montreal and Province Line, formerly Montreal, Portland and Boston	58·60	28,083 46	22,167 67
53	Montreal and Vermont Junction	23·60	16,208 36	39,906 63
54	Morrissey, Fernie and Michel, B.C	4·73	8,880 64	7,794 74
55	New Westminster Southern	24·10	12,131 50	9,394 14
56	Nelson and Fort Sheppard	55·42	50,724 15	16,770 06
57	New Brunswick Coal and Ry. Co. (formerly Central of N.B.)	44·66	864 03	5,614 85
58	New Brunswick and Prince Edward Island	37·50	6,895 89	5,909 80
59	Nosbonsing and Nipissing	5 50	14,065 28	3,076 70
60	New Brunswick Southern (formerly Shore line)	82 50	12,478 05	13,694 79
61	Nova Scotia Steel and Coal Co.'s Ry	12·50	4,949 71	8,481 18
62	Orford Mountain	26·50	9,235 01	8,257 14
63	Ottawa, Northern and Western, including Pontiac Pacific Junction Ry. and Interprovincial Bridge. 158·70		35,904 41	12,477 01
64	Ottawa and New York	56·79	22,222 86	30,950 76
65	Phillipsburg Ry. and Quarry Co.'s Ry	7·50	1,796 95	263 95
66	Qu'Appelle, Long Lake and Saskatchewan	253·96	222,880 68	120,362 27
67	Quebec Central	213·50	123,498 29	181,669 86
68	Quebec and Lake St. John	240·00	72,208 28	122,706 08
69	Quebec Ry. Light and Power Co. (formerly Quebec, Montmorency and Charlevoix	30·00	4,923 47	13,117 62
70	Quebec Southern, comprising United Counties, East Richelieu Valley and South Shore Rys	143·50	43,536 26	69,676 43
71	Red Mountain	9·59	12,358 06	19,062 69
72	Rutland and Noyan	3·39		
73	Salisbury and Harvey	45 00	11,190 05	10,046 32
74	Schomberg and Aurora	15·00	780 00	1,833 23
75	Stanstead, Shefford and Chambly	43·00	14,830 65	17,678 94
76	St. Clair Tunnel, yard and approaches	2·25	6,506 48	96,536 51
77	St. Lawrence and Adirondack	32·82	37,995 69	50,692 95
78	St. Mary's River	47 00	6,490 44	3,934 02
79	Sydney and Louisburg (Dominion Coal Co)	48·67	52,614 32	155,360 07
80	Témiscouata	113 00	45,114 50	38,436 84
81	Tilsonburg, Lake Erie and Pacific	35 33	6,555 61	12,151 74
82	Thousand Islands	6·33	3,634 24	8,233 67
83	Toronto, Hamilton and Buffalo	87·78	76,525 26	136,459 77
84	Vancouver, Victoria and Eastern Ry. and Navigation Co.	16·50	4,692 70	3,832 15
85	Victoria and Sidney, B.C.	16·26	10,135 53	7,718 74
86	Victoria Terminal Ry. and Ferry Co.	18·40	5,320 30	9,491 70
87	Wellington Colliery Co., B.C	10·75	5,052 35	12,744 58
88	York and Carleton	5·75	766 00	1,355 00
	Totals	19,430 99	15,569,060 66	20,879.359 36

for the Year ended June 30, 1904 —*Concluded.*

Maintenance of Cars.	General and Operating Charges.	Total.	Cost of operating per train mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	$ cts.		
1,015 25	8,718 26	27,947 46	....	45	Taken from 1903 report. No return received this year.
817 51	1,483 76	5,979 32	0 72	46	
364 56	4,965 22	17,907 79	0 89	47	
2,420 67	5,300 48	20,314 19	1 79	48	
9,564 30	37,751 19	121,382 37	0 73	49	
2,986 44	15,308 14	50,163 19	0 46	50	
24,520 72	146,403 57	466,312 04	1 25	51	
9,319 48	20,966 99	80,537 60	1 01	52	
25,503 90	36,051 00	117,669 89	0 82	53	
115 53	4,787 18	21,578 09	1 22	54	
859 37	16,464 54	38,849 55	1 52	55	
1,894 17	27,623 03	97,011 41	2 21	56	
115 54	2,326 34	8,920 76	.....	57	Taken from 1903 report. No return received this year, until too late for compilation.
378 12	4,587 80	17,771 61	0 48	58	
3,516 32	23,295 62	43,953 92	2 86	59	
2,078 81	14,414 76	42,666 41	0 76	60	
200 00	4,276 92	17,907 81	1 19	61	
232 52	5,908 67	23,633 34	0 67	62	
4,383 81	15,106 26	67,871 49	1 12	63	Returns up to Oct. 31, 1903, only; C.P.R. then leased the line.
4,312 16	42,018 20	99,503 98	0 92	64	
....	916 98	2,977 88	4 10	65	
13,418 21	102,571 72	459,232 88	2 00	66	
30,854 56	174,752 01	519,774 72	0 82	67	
16,290 73	115,357 38	326,562 47	0 90	68	
3,235 20	12,507 59	33,783 88	0 85	69	
7,713 67	64,904 66	185,831 02	... .. .	70	Return taken from 1903 report. No return received this year.
1,515 68	17,165 55	50,101 98	3 02	71	
....	....	....	.....	72	Operated by Rutland Ry. Co., U.S.
1,555 87	4,810 39	27,602 63	1 11	73	
46 86	488 62	3,148 71	0 31	74	
5,619 37	16,552 70	54,681 66	0 77	75	
996 73	31,010 00	135,049 72	.. . .	76	
1,814 49	40,351 16	130,854 29	0 75	77	
616 09	8,666 82	19,707 37	0 52	78	
64,353 88	116,305 59	388,633 86	1 88	79	
9,465 70	25,822 86	118,839 90	0 76	80	
1,169 60	12,456 87	32,333 82	0 58	81	
414 91	12,631 72	24,914 54	0 69	82	
14,861 17	221,414 58	449,260 78	1 30	83	
530 71	5,375 29	14,430 76	1 07	84	
1,448 60	9,903 36	29,206 23	1 10	85	
229 20	9,905 80	24,947 00	0 94	86	
3,394 47	....	21,191 40	0 99	87	
10 00	757 00	2,888 00	4 12	88	
6,960,676 98	26,154,964 73	74,563,161 73			

No. 8.—Summary of Accidents

Number.	Name of Railway.	Mileage.	Passengers, Employees or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.		At work on or near Track making up Trains.	
				Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1	Atlantic & Lake Superior	100·00	Employees						1
2	Algoma Central & Hudson Bay	91·75	Employees	1			1		
			Others						
3	Bay of Quinté	93·37	Employees						
			Others						
4	British Yukon	90·32	Employees						
5	Brockville Westport & North-western	45·00	Others						
6	Canada Atlantic	458·60	Passengers		2	1	6		
			Employees		1				
			Others						
7	Canada Southern	382·19	Passengers		1		2		
			Employees	5	9	1	2		11
			Others				2		1
8	Canadian Northern	1353·30	Passengers						
			Employees		1	1	4		
			Others						
	Canadian Government Railways:								
9	Intercolonial	1310·26	Passengers		2	1	7		
			Employees	2	6		8	1	23
			Others			1	3		
10	Prince Edward Island	209·00	Employees		2				
11	Canadian Pacific	8062·00	Passengers	2	2	1	10		
			Employees	18	21	3	16		
			Others	3	3	5	5		
12	Crow's Nest Southern	43·38	Passengers		1				
			Employees						
			Others						
13	Dominion Atlantic	220·50	Passengers	1					
			Employees						1
			Others						
14	Esquimalt & Nanaimo	78·00	Passengers				1		
			Others						
15	Grand Trunk	3,143·60	Passengers	2	7	4	27		
			Employees	7	79	2	45		4
			Others	5	10	1	19		
16	Great Northern of Canada	208·10	Employees		2		1		4
			Others				1		
17	Hereford	53·30	Employees						
18	Inverness Railway & Coal Co.	61·00	Employees		2				
19	Kettle River Valley	3·86	Employees				1		
20	Kingston & Pembroke	112·85	Passengers				1		
			Others						
21	Lake Erie & Detroit River	223·41	Passengers		1		3		
			Employees		2			1	3
			Others						
22	Massawippi Valley	35·46	Passengers						
			Employees						1
23	Midland of Nova Scotia	57·87	Employees						
24	Montreal & Atlantic	†							
25	Montreal & Vermont	23·60	Employees						
26	New Westminster Southern	24·10	Others						
27	Nelson & Fort Sheppard	55·42	Passengers						
			Employees	1	1				
			Others						
28	Ottawa & New York	56·79	Others						
29	Quebec & Lake St. John	240·00	Employees		2		2		1
30	Qu'Appelle, Long Lake & Saskatchewan	253·96	Employees		1				
			Others						

* In station yard. † Included in C. P. Ry.

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for the Year ended June 30, 1904.

Putting Arms or Heads out of Windows.		Coupling Cars.		Collisions, or by Trains thrown from Track.		Struck by Engine or Cars at Highway Crossing.		Walking, standing, lying or being on Track.		Explosions.		Striking Bridges.		Other Causes.		Totals.		
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Number.
																	1	1
															1	1	2	2
															1		1	
											1						1	3
								1								1		
															1		1	4
								1								1		5
							3									1	11	
			4		4				2						13		24	6
								4	7							4	7	
																	3	
			5			1	4						1		7	7	39	7
				1	1	3	5	1							4	5	13	
															1		1	
			1		5				1					2	9	3	21	8
				1				1	2							2	2	
				1	30										1	2	40	
			23	4	12			1							13	8	85	9
					2	3	4	12	6					2	2	18	17	
			2												13		17	10
				7	28			2							4	12	44	
		4	33	24	31			18	23			1	4	18	39	86	167	11
				5	3	11	2	46	23					8	1	78	37	
																	1	
				1	39										2	1	41	12
								1								1		
																1		
					2												3	13
						*1										1		
																	1	
							1		4								5	14
					63			3							18	9	115	
	1	4	78	26	69		2	21	31		4	1	10	7	116	68	439	15
			3	2	8	16	41	32	47					4	38	60	166	
	1		6												1		15	16
								1								1	1	
			1														1	17
			1												2		5	18
																	1	19
																	1	20
									1								1	
					6												10	
				2				1							3	4	8	21
						1	2		3							1	5	
					2												2	22
				3	1											3	2	
					1												1	23
																		24
		1													2	1	2	25
									1								1	26
					1												1	
														6		7	1	27
														1		1		
								1								1		28
			3												6		14	29
																	1	30
						1	1									1	1	

No. 8.—Summary of Accidents for the

Number.	Name of Railway.	Mileage.	Passengers, Employees or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.		At work on or near Track making up Trains.	
				Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
31	Quebec Central	213·50	Others	..	....	....	....	...	.....
32	Quebec Railway, Light & Power Co. (Montmorency Division	30·00	Employees	....	....	....	....	....	....
33	Red Mountain	9·59	Employees	....	1	...	....	....	.. .
34	Stanstead Shefford & Chambly	43·00	Employees	...	....	....	....	....	.... .
35	St. Lawrence & Adirondack	32·82	Employees	....	..	....	....	....	. . .
36	Sydney & Louisbourg (Dominion Coal Co.)	48·67	Employees	....	....	...	2	1	.....
			Others	..	....	..	...	...	.....
37	Thousand Islands	6·33	Employees	....	....	....	....	....	.....
38	Toronto, Hamilton & Buffalo	87·78	Employees	....	....	....	2	....	.....
			Others	...	1	....	....	...	. . .
39	Vancouver, Victoria & Eastern	16·50	Passengers	...	....	...	....	....	.....
			Employees	....	..	....	....	....	.....
40	Victoria & Sydney, B.C.	16·26	Passengers	....	1	...	....	....	.....
41	Victoria Terminal Ry. & Ferry Co	18·40	Employees	...	....	....	....	..	.....
				47	161	21	171	3	50

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Year ended June 30, 1904—*Concluded.*

Putting Arms or Heads out of Windows.		Coupling Cars.		Collisions, or by Trains thrown from Track.		Struck by Engine or Cars at Highway Crossing.		Walking, standing, lying or being on Track.		Explosions.		Striking Bridges.		Other Causes.		Totals.		
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Number.
								1								1		31
									1								1	32
	1														1		3	33
															2		2	34
															1		1	35
		1	2											1	2	5	1	36
								1	1						1	1	1	
			1											1		2		37
		1	2												1	4	1	38
														1		1		39
									1							1		
			2													3		40
					1											1		41
	3	11	167	77	309	37	65	149	154		5	2	15	48	305	395	1,405	

No. 9.—Statistics of Lines of Railway owned by Coal and

Name of Company.	Location.	Length of Line.	Gauge.	Length of Road laid with Steel Rails.	Length of Road laid with Iron Rails.	Weight of Steel Rails per yard.
		Miles.		Miles.	Miles.	Lbs
Acadia Coal Co., Ltd,. N.S.....	Thorburn to N. Glasgow 6·00					
" "	Branch, main line to Brickworks..... .. 0·50					
" "	Branch, I. C. Ry. to Lourdes Junction... 1·50	10 25	4·8½	9·50	·75	56
" "	Branch, Lourdes Junction to Colliery..... 1 50					
" " ...	Branch, Lourdes Junction to New Glasgow 0·75					
Intercolonial Coal Mining Co., Ltd., N.S.	Drummond Colliery to Abercrombie Pier	*10·00	4·8½	10·50	.....	56
" " ..	Branch, Drummond Colliery to Drummond Siding.....	†0.50				
Londonderry Iron Co., N.S.....	M.P.F. Co.'s tank to I.C.R. Station, Londonderry.....	2·46	4·8½			
" "	Sidings around works...	2·71	4·8½			
" "	Branch, Cumberland to Old Mountain	3·83	3·0	13·83	.....	56 & 35
" "	Branch, Old Mountain to Scale House	1·00	3·0			
" "	Branch, Station, East Mines to works, East Mines.....	3·83	4·8½			
N. S. Steel & Coal Co., Ltd., N.S..	Sydney Mines to North Sydney	5·00	4·8½			
" "	Branch, No. 1 Colliery to No. 3 Colliery.	3·00	4·8½	28·00	.....	56 & 80
" "	Branch, Sidings.....	20·00	4·8½			
Sydney & Louisbourg, N.S...	Sydney to Louisburg	39·30	4·8½			
" "	Branch, Dominion No. 1 to Reserve Mine	2·30	4·8½			
" "	Branch, main line to International Mine	0·25	1·8½			
" "	Branch, main line to Bore Hole	0.04	4·8½			
" "	Branch, main line to Caledonia Mine.....	1·20	4·8½			
" "	Branch, main line to Hub Mine	0·93	4·8½			
" "	Branch, main line to Gowrie Colliery	0·38	4·8½	47·42	....	56 & 80
" "	Branch, main line to Glace Bay Wharf.....	1·00	4·8½			
" "	Branch, main line to Wash Plant, ...	0.54	4·8½			
" "	Branch, main line to Mira Quarry.....	0·25	4·8½			
" "	Branch, main line to Sydney Coal Yard.....	1·23	4·8½			
* Wellington Colliery Co., Ltd....	No. 3 Slope Extension to Fiddick's Junction	5·50	4·8½			
" "	Branch, E. & N. Ry., Ladysmith to wharfs.	1·00	4·8½	15·75	.....	50, 56 & 60
" " ...	Branches, No. 5 and 7 shafts to slopes 7 and 8	9·25	4·8½			
Western Fuel Co.....	Wharf to No. 5 shaft.....	4·00	4·8½	8·75	.....	56
"	Branch, Chase River to Harewood Mine..... . ..	4·75	4·8½			
		134·50	.....	133·75	·75	.....

*Connecting Drummond Colliery with Coal Shipping Pier, Pictou Harbour. †Connecting mines
Railway Statistics. * Under construction 6¾ miles. From Steam Railway Return.

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Iron Mining Companies for the Year ended June 30, 1904.

Weight of Iron Rails per yard.	No. of Junctions with other Railways.	No. of Crossings of other Railways at rail level.	No. of Crossings of Highways.	No. of Overhead Bridges.	Height, clear headway, of overhead bridges above rail level.	No. of Locomotive Engines.	No. of Wagons.	Total Mileage Worked	No. of Tons of Coal Carried.	No. of Tons of Iron Ore Carried.	No. of Tons of Iron Carried.	No. of Tons of other Freight Carried.	Total No. of Tons of Freight Carried.
Lbs.					Ft.								
56	3	...	4	2	14·10 20·6	4	17	10·25	343,748	.....	.....	2,460	346,208
.....	1	1	8	...	.....	2	160	10·50	240,218	.....	.....	8,869	249,087
.....	1	....	5	....	.....	5	52	13·83	39,000	38,000	13,000	210,000	300,000
.....	1	....	6	....	.....	8	300	28·00	319,666	.....	.....	58,139	377,805
.....	1	2	30	2	18	21	1361	47·42	§2,958,677	.....	.....	‡137,258	3,095,935
.....	1	....	4	1	16·9	6	250	15·75	372,811	.....	.....	2,571	328,458
.....	.....	.....	2	1	14·0	6	274	8·75	327,958	.....	.....	500	375,382
.....	8	3	59	6	.....	54	2414	134·50	4,602,078	38,000	13,000	419,797	5,072,875

with Intercolonial Railway, Westville. ‡Includes pig iron, ore, sand and gravel. § Included in Steam

No. 10.—Lines of Railway owned by Coal and Iron Mining Companies—Summary of Accidents for the Year ended June 30, 1904.

Name of Company.	Mileage.	Passengers, Employees or Others.	Fell from Cars — Killed.	Jumping on or off Cars when in motion.		Coupling Cars.		Collisions, or by Cars thrown from Track—Killed.	Struck by Cars on Highway Crossings.		Walking, standing, lying or being on Track.		Other causes— Killed.	Totals.	
				Killed.	Injured.	Killed.	Injured.		Killed.	Injured.	Killed.	Injured.		Killed.	Injured.
Acadia Coal Co	10·25	Employees..													
Intercolonial Coal Mining Co....	10·50	Employees.													
Nova Scotia Steel & Coal Co., Ltd. (Sydney Mines).....	28·00	Employees					1						1	1	....
		Others ...					1								1
Wellington Colliery Co., Ltd., B.C	15·75	Employees.			1										1
Western Fuel Co.....	8·75	Employees.	1								1				1
Totals.....	.....	.....	1		1		2				1		1	3	3

No. 11.—Statement of Aid granted to Railways—Constructed and under Construction—by Governments, up to the year ended June 30, 1904.

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
Dominion Government.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Albert (now Salisbury and Harvey)	* 29,391 01					
Algoma Central and Hudson Bay			*A* 720,000 00			
Albert Southern			50,460 00			
Atlantic and North-west in Canada			*a* 1,422,000 00			
Baie des Chaleurs (now in Atlantic and Lake Superior)			*A* 724,153 98			
Belleville and North Hastings—Grand Junction (now in Grand Trunk)			21,888 00			
Beauharnois Junction			62,400 00			
Brantford, Waterloo and Lake Erie (now Toronto, Hamilton and Buffalo)			57,600 00			
Brockville, Westport and Sault Ste. Marie			105,200 00			
Bruce Mines and Algoma			*A* 28,800 00			
Buctouche and Moncton			101,600 00			
Canada Atlantic			282,355 20			
Canada Central			1,525,250 00			
Canada Eastern (formerly Northern and Western of New Brunswick)			*b* 374,839 84			
Canadian Pacific			*c*56,994,112 39			
" Crow's Nest Pass			3,630,000 00			
Cap de la Madeleine			7,424 00			
Cape Breton			*A* 192,000 00			
Caraquet			224,000 00			
Central of New Brunswick (now New Brunswick Coal and Ry.)			*A* 190,400 00			
Central of Nova Scotia (formerly Nova Scotia Central, now in Halifax and South Western)			739,200 00			
Central Ontario			*A* 67,200 00			
Chateauguay and Northern			191,595 00			
Coast Railway of Nova Scotia (now Halifax and Yarmouth)			*A* 195,200 00			
Cobourg, Northumberland and Pacific			*A* Lapsed.			
Columbia and Kootenay			88,800 00			
Cornwallis Valley (now in Dominion Atlantic)			44,800 00			
Cumberland Railway and Coal Company			39,850 00			
Drummond County (now in Intercolonial system)			*A* 423,936 00			
Dominion Line Company (now in Hereford Ry.)			15,360 00			
East Richelieu Valley (now part of Quebec Southern)			*A* †69,952 00			

*Including $14,665.45 used iron rails. ‡ Including $83,612.54 rails to St. Martin's and Upham Ry. *a* Payable in half-yearly instalments of $35,550 each for 20 years, commencing July 1, 1889, and also $1,732,500 as bonus in addition on the portion of this railway through the state of Maine. *b* Including $24,439.84 rails to Chatham Branch. *c* Including cost of railway lines built by Dominion Government, and transferred to Canadian Pacific Railway Company, $31,145,738.54. † East Richelieu Valley, balance of $6,848, has lapsed.

No. 11.—Statement of Aid Granted to Railways by Governments—*Continued.*

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
Dominion Government—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Edmonton, Yukon and Pacific			160,000 00			
Elgin and Havelock			*d* 82,652 82			
Erie and Huron (now in Lake Erie and Detroit River Ry.)			96,000 00			
Esquimalt and Nanaimo			750,000 00			
Fredericton and St. Mary's Railway and Bridge Company	300,000 00		30,000 00			
Grand Trunk	15,142,633 33					
Victoria Jubilee Bridge of Grand Trunk Ry.			500,000 00			
Grand Trunk, Georgian Bay and Lake Erie, Owen Sound Branch			39,744 00			
Great Eastern (in Atlantic and Lake Superior)			40,345 00			
Great Northern (exclusive of Ottawa Valley Section)			*A* 536,188 31			
Guelph Junction			46,000 00			
Gulf Shore			*A* 53,699 20			
Hampton and St. Martin (formerly St. Martin and Upham)			‡ 83,612 54			
Harvey Branch			5,553 57			
Hereford			155,200 00			
Indian River			*A* 60,800 00			
Intercolonial			72,742,163 75			
Interprovincial Bridge Ottawa, now in Ottawa, Northern & Western			212,500 00			
International (Atlantic and North-west) C.P.R.			156,800 00			
Inverness and Richmond, now Inverness Ry. and Coal Co.			*A* 627,000 00			
Irondale, Bancroft and Ottawa			144,000 00			
James Bay			848,000 00			
Joggins (now Canada Coals and Railway Co.)			37,500 00			
Kent Northern	‡58,334 27					
Kingston, Napanee and Western (now in Bay of Quinté)			227,932 80			
Kingston and Pembroke			48,000 00			
L'Assomption			11,200 00			
Lake Erie and Detroit River			475,851 00			
Lake Temiscamingue Colonization			310,335 95			
Leamington and St. Clair (now in Canada Southern)			51,200 00			
Lindsay, Bobcaygeon and Pontypool			128,000 00			
Lotbinière and Megantic			96,000 00			
Lower Laurentian (now in Great Northern)			217,600 00			
Maganetawan River			3,552 00			
Manitoulin and North Shore			*A* 204,800 00			
Massawippi Valley			5,376 00			
Middleton and Victoria Beach			*A* 131,200 00			
Midland of Nova Scotia			*A* 362,200 30			

Montfort and Gatineau Colonization (in Great Northern)			167,440 00
Montreal and Lake Maskinongé			41,280 00
Montreal and Champlain Junction			103,690 00
Montreal and Ottawa			192,000 00
Montreal and Province Line (formerly Montreal, Portland & Boston)			† 58,560 00
Montreal and Western			361,270 00
Nakusp and Slocan			117,760 00
New Brunswick and Prince Edward Island			113,440 00
New Glasgow Iron and Coal Co. (now Nova Scotia Steel Co.)			39,840 00
Nipissing and James Bay			64,000 00
Northern and Pacific Junction			1,320,000 00
Northern Colonization			58,384 00
Nova Scotia Southern (now in Halifax South Western)			
Ontario, Belmont and Northern (leased to Central Ontario)			30,720 00
Ontario and Quebec			196,000 00
Ontario and Rainy River (now in Can. Northern)			A1,632,000 00
Orford Mountain			84,800 00
Ottawa, Arnprior and Parry Sound & Parry Sound Colonization (in Canada Atlantic)			A 779,712 00
Ottawa and Gatineau (now Ottawa, Northern and Western)			A 410,688 00
Ottawa and New York			A 262,384 00
Ottawa Valley (formerly part of Great Northern) now in Atlantic and Lake Superior			21,600 00
Parry Sound Colonization (in Canada Atlantic)			152,800 00
Pembroke Southern (in Canada Atlantic)			A 64,000 00
Philipsburg Railway and Quarry Co			A 23,712 00
Pontiac Pacific Junction, now in Ottawa, Northern and Western			A§ 193,578 00
Pontiac and Renfrew			13,600 00
Port Arthur, Duluth and Western (now in Canadian Northern)			271,200 00
Prince Edward Island			6,128,116 80
Quebec Bridge and approaches			374,353 33
Quebec and Lake St. John			1,230,695 00
Quebec Central			318,312 00
Quebec, Montmorency and Charlevoix			96,000 00
Quebec, Montreal, Ottawa and Occidental, North Shore, Montreal to Quebec			†954,000 00
" " " "			1,500,000 00
" " Montreal to Ottawa			†1,440,000 00
Quebec and New Brunswick			201,600 00
Restigouche and Western (now International Ry. of N. B.)			A 320,000 00
Schomberg and Aurora			18,000 00
St. Louis and Richibucto			22,400 00
St. John Bridge and Railway Extension	433,900 00		
St. Lawrence and Adirondack			A 149,181 60
St. Mary's River			126,200 00
St. Clair Tunnel			375,000 00
St. Stephen and Milltown			A 14,848 00
Shuswap and Okanagan			163,200 00
South Norfolk			54,400 00

d Including $44,252.82 iron rails. ‡ Used iron rails. † Balance of Subsidy has lapsed $2,240. †Dominion Government pays to Quebec Government 5 per cent interest per annum on these two amounts. *A* *See* note on page No. 21. § Balance $138,272—has lapsed.

No. 11.—Statement of Aid granted to Railways by Governments—*Continued.*

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
Dominion Government—*Concluded.*	$ cts.	$ cts.	$ cts	$ cts.	$ cts.	$ cts.
South Shore (formerly Montreal and Sorel, now in Quebec Southern)			293,541 92			
Sydney and Louisbourg—Dominion Coal Company			87,808 00			
Témiscouata			645,950 00			
Thousand Islands			29,840 00			
Tilsonburg, Lake Erie and Pacific			*A* 158,871 48			
Tobique Valley			134,016 00			
Toronto, Grey and Bruce			14,656 00			
United Counties (now part of Quebec Southern)			*A** 188,816 00			
Waterloo Junction			32,800 00			
West Ontario Pacific			60,000 00			
Western Counties or Yarmouth and Annapolis (now in Dominion Atlantic)			500,000 00			
Windsor and Annapolis (now in Dominion Atlantic)			1,193,369 00			
York and Carleton			*A* 18,336 00			
		15,964,258 61		172,433,055 78		
Ontario Government.						
Bay of Quinté including Kingston Napanee & Western			84,000 00			
Brantford, Norfolk and Port Burwell, Grand Trunk			68,000 00			
Bruce Mines and Algoma			49,000 00			
Canada Atlantic			270,000 00			
Canada Central			1,479,000 00			
Canada Southern			147,859 00			
Central Ontario			189,500 00			
Cobourg, Blairton and Marmora	26,000 00		18,740 09			
Credit Valley			531,000 00			
Erie and Huron (now in Lake Erie and Detroit River Ry.)			83,000 00			
Grand Junction and Belleville and North Hastings			224,660 00			
Grand Trunk, Georgian Bay and Lake Erie			336,000 00			
Hamilton and North-western			565,020 00			
Irondale, Bancroft and Ottawa			315,000 00			
James Bay			730,000 00			
Kingston and Pembroke			456,493 00			
London, Huron and Bruce			178,630 00			
Lindsay Bobcaygeon and Pontypool			57,000 00			
Maganetowan River			10,000 00			
Midland Ontario			168,350 00			
Montreal and Ottawa			100,000 00			

Northern			196,188 00	
North Simcoe			83,300 00	
Ontario, Belmont and Northern (leased to Central Ontario)			19,149 39	
Ontario and Rainy River (now in Canadian Northern)			1,072,800 00	
Ottawa, Arnprior and Parry Sound, leased to Canada Atlantic			434,076 06	
Ottawa and New York			35,000 00	
Parry Sound Colonization, leased to Canada Atlantic			143,250 00	
Pembroke Southern			55,500 00	
Port Arthur, Duluth and Western (now in Canadian Northern)			255,571 00	
Tilsonburg, Lake Erie and Pacific			38,564 00	
Toronto and Nipissing			105,212 00	
Lake Simcoe Junction			53,000 00	
Toronto, Grey and Bruce			375,282 00	
Victoria			312,000 00	
Wellington, Grey and Bruce			241,276 00	
Whitby, Port Perry and Lindsay			94,957 59	
Interprovincial Bridge at Ottawa			50,000 00	
		26,000 00		8,896,378 04
QUEBEC GOVERNMENT.				
Baie des Chaleurs (now in Atlantic and Lake Superior)			1,415,000 00	
Beauharnois Junction			179,073 00	
Canada Atlantic			200,000 00	
Great Eastern (now in Atlantic and Lake Superior)			156,000 00	
Great Northern (including Lower Laurentian)			1,025,733 66	
Drummond County (now in Intercolonial Ry.)			347,420 54	
East Richelieu Valley (now part of Quebec Southern)			115,215 00	
Hereford (including Dominion Lime Co.'s Line)			60,500 00	
International (now Atlantic and North-west—C.P.R.)			391,122 02	
Lake Champlain and St. Lawrence Junction			250,280 00	
Lake Témiscamingue Colonization			350,076 82	
L'Assomption			5,512 50	
Lotbinière and Mégantic			126,994 00	
Missisquoi Valley (now Atlantic and North-west—C.P.R.)			228,000 00	
Montfort and Gatineau Colonization (now in Great Northern)			168,395 80	
Montreal and Champlain Junction			150,000 00	
Montreal and Ottawa			182,210 00	
Montreal, Portland and Boston (now Montreal and Province Line)			231,122 00	
Montreal and Sorel (now South Shore)			276,645 00	
Montreal and Western			472,500 00	
Montreal and Lake Maskinongé			87,750 00	
Orford Mountain			98,884 92	
Ottawa and Gatineau (now Ottawa Northern and Western)			780,570 00	
Ottawa Valley (now in Atlantic and Lake Superior)			25,390 00	
Philipsburg Ry. and Quarry Co			25,667 00	
Pontiac Pacific Junction			412,102 58	

* Balance $19,184—has lapsed.

A See Note on page No. 21.

No. 11.—Statement of Aid granted to Railways by Government *Continued.*

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
Quebec Government—*Concluded.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Pontiac and Renfrew			17,433 60			
Quebec Bridge			250,000 00			
Quebec and Lake St. John			2,533,000 00			
Quebec Central			1,076,123 14			
Quebec, Montreal, Ottawa and Occidental, including North Shore	3,722,956 00		727,000 00			
Quebec, Montmorency and Charlevoix			306,945 50			
South-eastern (now Montreal and Atlantic)			444,000 00			
St. Lawrence and Adirondack			65,216 00			
Témiscouata			362,250 00			
United Counties (now part of Quebec Southern)			210,000 00			
Waterloo and Magog (now in Atlantic and North-west—C P.R)			92,000 00			
		3,722,956 00		13,846,133 08		
New Brunswick Government.						
Albert (now Salisbury and Harvey)			455,000 00			
Albert Southern			48,680 00			
Buctouche and Moncton			96,000 00			
Caraquet			180,000 00			
Central of New Brunswick			139,000 00			
Fredericton			230,000 00			
Grand Southern (now New Brunswick Southern)			413,000 00			
Gulf Shore			41,950 00			
Harvey Branch			9,000 00			
Kent Northern			135,000 00			
New Brunswick			76,000 00			
New Brunswick and Canada			575,000 00			
New Brunswick and Prince Edward Island			99,708 90			
Northern and Western (now Canada Eastern)			400,000 00			
Elgin, Petitcodiac and Havelock (now Elgin and Havelock)			107,500 00			
Quebec and New Brunswick			45,000 00			
Restigouche and Western—now International of New Brunswick			275,000 00			
St. Martin and Upham (now Hampton and St. Martin)			145,600 00			
St. John Bridge and Railway extension			5,181 81			
St. John and Maine			880,000 00		300,000 00	
St. Louis and Richibucto			21,000 00			
St. Stephen and Milltown			13,920 00			

Témiscouata			66,000 00			
Tobique Valley			70,000 00			
York and Carleton			13,897 00			
				4,563,012 71		300,000 00
NOVA SCOTIA GOVERNMENT.						
Cape Breton			96,000 00			
Coast Line (now Halifax and Yarmouth)			160,610 00			
Cornwallis Valley (now in Dominion Atlantic)			44,890 00			
Canada Coal and Railway Co.'s Line (formely Joggins)			35,200 00			
Inverness and Richmond (now Inverness railway and Coal Co.			272,000 00			
Midland Ry. of Nova Scotia (formerly Stewiacke Valley and Lansdowne)			185,600 00			
New Glasgow Iron, Coal and Railway Co. (now Nova Scotia Steel Co.)			40,000 00			
Halifax and South Western			489,338 92			
Nova Scotia Central (now Central Railway of Nova Scotia) in H. & S. W.			432,261 08			
Nova Scotia Southern in Halifax & South Western			374,400 00			
Springhill and Parrsboro' (Cumberland Railway and Coal Co.)			173,650 00			
Sydney and Louisbourg, Dominion Coal Co			82,000 00			
Western Counties, Yarmouth and Annapolis (now in Dominion Atlantic)			679,197 15			
				3,065,087 45		
MANITOBA GOVERNMENT.						
Canadian Pacific			375,377 50			
Manitoba South-western Colonization	900,000 00					
The Manitoba						
		900,000 00				
			641,575 25			
				1,016,952 75		
BRITISH COLUMBIA GOVERNMENT.						
Canadian Pacific			37,500 00			
				37,500 00		
Total aid granted by Governments		20,613,214 61		203,858,119 81		300,000 00

NOTE. For Statement of payments of Government Aid granted to Railways, see No, 1 Summary Statement of Capital.

No. 11.—STATEMENT of Aid granted to Railways—Construction and under Construction—by Municipalities, June 30, 1904.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription in Shares or Bonds.	Total.
ONTARIO.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Deseronto	Bay of Quinté Ry				30,000 00		
Town of Napanee	Kingston, Napanee and Western			30,000 00			
Village of Newburgh	" "			7,500 00			
Township of Camden	" "			30,000 00			
" Sheffield	" "			15,000 00			
" Loughborough	" "			5,000 00			
City of Kingston	" "			75,000 00			
Accrued interest	" "			5,440 43			
Town of Brockville	Brockville, Westport and Sault Ste. Marie			36,000 00	167,990 43		
Elizabethtown	" "			7,000 00			
Rear of Yonge and Escott	" "			15,000 00			
" Leeds and Lansdowne	" "			5,000 00			
Bastard and Burgess	" "			28,000 00			
South Crosby	" "			6,000 00			
Village of Newboro'	" "			4,000 00			
North Crosby	" "			15,000 00			
					116,000 00		
Village of Bruce Mines	Bruce Mines & Algoma				500 00		
Various municipalities	Buffalo and Lake Huron				966,000 00		
Renfrew	Canada Central, now Can. Pacific					30,000 00	
Horton	"					* 7,500 00	
Admaston	"					5,000 00	
							42,500 00
County of Elgin	Canada Southern			200,000 00			
Township of Townsend	"			30,000 00			
" Dereham	"			15,000 00			
" Anderdon	"			15,000 00			
Town of St. Thomas	"			25,000 00			
Township of Malden	"			15,000 00			
Town of Amherstburg	"			15,000 00			
South Norwich	"			7,500 00			
					322,500 00		
Sault Ste. Marie	Canadian Pacific			20,000 00			
Carleton Place	"			20,000 00			
Owen Sound	"			40,000 00			
					80,000 00		
Northumberland and Durham	Cobourg, Blairton and Marmora				113,500 00		

West Hawkesbury	Central Counties (leased to Canada Atlantic)		15,000 00	
Vankleek Hill	" "		1,200 00	
Dalkeith	" "		800 00	
Rockland	" "		6,000 00	
Clarence	" "		1,000 00	
				24,000 00
Town of Trenton	Central Ontario		10,000 00	
Wellington Village	"		2,500 00	
Town of Picton	"		21,000 00	
County of Prince Edward	"		60,000 00	
				93,500 00
County of Oxford	Credit Valley		200,000 00	
" Wellington	"		135,000 00	
" Waterloo	"		110,000 00	
" Peel	"		75,000 00	
" Halton	"		70,000 00	
City of Toronto	"		350,000 00	
" St. Thomas	"		50,000 00	
Town of Milton	"		30,000 00	
" Brampton	"		20,000 00	
" Ingersoll	"		10,000 00	
" Orangeville	"		15,000 00	
Village of Streetsville	"		20,000 00	
				1,085,000 00
County of Kent	Erie and Huron, now in Lake Erie and Detroit		155,000 00	
City of Chatham	"		30,000 00	
Town of Sarnia	"		16,000 00	
Village of Dresden	"		20,500 00	
" Bleinheim	"		14,000 00	
" Wallaceburg	"		11,000 00	
Township of Sombra	"		14,000 00	
" Woodhouse	Grand Trunk, Georgian Bay and Lake Erie		15,000 00	257,500 00
Town of Simcoe	" "		10,000 00	
Township of South Norwich	" "		10,000 00	
" North "	" "		40,000 00	
Town of Woodstock	" "			
Township of East Oxford	" "		25,000 00	
" Woodstock	" "		25,000 00	
Town of Woodstock	" "		60,000 00	
" Stratford	" "			
County of Perth	" "		120,000 00	
Township of Mornington	" "		40,000 00	
Township of Elma	" "		10,000 00	
Town of Listowel	" "		15,000 00	
Township of Wallace	" "		10,000 00	
Town of Palmerston	" "		30,000 00	
Township of Minto	" "		25,000 00	

No. 11.—STATEMENT of Aid granted to Railways by Municipalities—*Continued.*

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
ONTARIO—*Continued.*		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Town of Harriston	Grand Trunk, Georgian Bay, and Lake Erie			20,000 00			
Township of Normanby	" "			80,000 00			
Township of Bentinck	" "			65,000 00			
Township of Brant	" "			20,000 00			
" Elderslie	" "			45,000 00			
" Arran	" "			45,000 00			
" Amabel	" "			43,000 00			
" Keppel	" "			32,000 00			
" Albemarle	" "			10,000 00			
Town of Mount Forest	" "			22,000 00			
Township of Egremont	" "			60,000 00			
Township of Glenelg	" "			20,000 00			
Town of Durham	" "			32,000 00			
					929,000 00		
Town of Owen Sound	Grand Trunk, Owen Sound Branch.			75,000 00			
Township of Sarawak	" "			7,500 00			
Township of Keppel	" "			3,000 00			
					85,500 00		
City of Belleville	Grand Junction and Belleville & N. Hasting Ry.			150,000 00			
Village of Sterling	"			5,000 00			
Township of Rawdon	"			15,000 00			
" Seymour	"			35,000 00			
" Percy	"			8,000 00		50,000 00	
" Asphodel	"				213,000 00		50,000 00
City of Guelph	Guelph Junc. leased to Can. Pac. R.					193,000 00	193,000 00
Town of Parry Sound	James Bay				20,000 00		
County of Frontenac	Kingston and Pembroke			170,000 00			
City of Kingston	" "			318,000 00			
Village of Renfrew	" "			3,000 00			
					491,000 00		
City of Hamilton	Hamilton and North-western			99,733 00			
Village of Georgetown	" "			11,289 00			
County of Peel	" "			30,974 00			
" Simcoe	" "			354,007 00			
Town of Collingwood	" "			12,084 00			

Township of Innisfil	"	"			22,592 00	
" Woodhouse	"	"			20,740 00	
" Adjala	"	"			2,500 00	
" Essa	"	"			2,500 00	
" Tossoronto	"	"			10,000 00	
" Mulmur	"	"			5,000 00	
Village of Alliston	"	"			8,000 00	
Township of Nottawasaga	"	"			20,386 00	
						599,805 00
City of Ottawa	Interprovincial Bridge					150,000 00
Township of South Colchester	Lake Erie and Detroit River				20,000 00	
" Gosfield	"	"			15,000 00	
Village of Kingsville	"	"			10,000 00	
Township of Romney	"	"			10,000 00	
" East Tilbury	"	"			5,000 00	
" Raleigh	"	"			10,000 00	
Village of Blenheim	"	"			5,000 00	
" Ridgetown	"	"			12,500 00	
Township of Alborough	"	"			7,000 00	
" Oxford	"	"			2,000 00	
Village of Dutton	"	"			2,500 00	
						99,000 00
Township of East Gwillimbury	Lake Simcoe Junction (in Grand Trunk system)				45,000 00	
" North "	"	"			20,000 00	
" Georgina	"	"			20,000 00	
" Whitchurch	"	"			15,000 00	
Village of Leamington	Leamington and St. Clair (in Canada Southern)				12,000 00	100,000 00
Township of Mersea	"	"			15,000 00	
Village of Comber	"	"			6,000 00	
						33,000 00
Town of Lindsay	Lindsay, Bobcaygeon and Pontypool				25,000 00	
" Bobcaygeon	"	"			11,000 00	
Township of Verulam	"	"			14,000 00	
" Harvey	"	"			3,000 00	
" Ops	"	"			15,000 00	
" Cartwright	"	"			5,000 00	
						73,000 00
Township of London	London, Huron and Bruce (now in Grand Trunk system)				15,000 00	
" Stephen	"	"			17,500 00	
" Osborne	"	"			25,000 00	
" Hay	"	"			15,000 00	
" Goderich	"	"			15,000 00	
" East Wawanosh	"	"			25,000 00	
" Hallet	"	"			25,000 00	
" Tuckersmith	"	"			10,000 00	
" Turnberry	"	"			5,000 00	
" Morris	"	"			10,000 00	

No. 11.—STATEMENT of Aid granted to Railways by Municipalities—*Continued.*

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
ONTARIO—*Continued.*		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts
Township of Stanley	London, Huron and Bruce (now in Grand Trunk system)			10,000 00			
Village of Clinton	" " "			20,000 00			
" Exeter	" " "			10,000 00			
Village of Kincardine	" " "			9,000 00			
" Wigan	" " "						
City of London	" " "			100,000 00			
Municipalities	London and Port Stanley (leased to Lake Erie and Detroit river Ry.)				311,500 00		
County of Elgin	" "					80,000 00	
" Middlesex	" "					100,000 00	
City of London	" "		1,332,854 60			200,000 00	
" St. Thomas	" "					34,000 00	
							414,000 00
Township of Thorah	Midland (now in Grand Trunk system).			50,000 00			
Town of Port Hope	"			30,000 00			
Townships of Orillia and Matchedash	"			12,500 00			
Town of Orillia	"			12,500 00			
Township of Tay	"			21,370 85			
Village of Omemee	"			2,000 00			
Township of Mara	"			12,500 00			
Town of Peterborough	"			4,000 00			
					144,870 85		
City of Toronto	Northern (now in Grand Trunk System).			100,000 00		190,000 00	
County of Simcoe	"					200,000 00	
Town of Barrie	"			30,000 00			
" Orillia	"			12,500 00			
Townships of Collingwood, Euphrasia and St. Vincent	"			99,480 00			
					241,980,00		390,000 00
Town of Smith's Falls	Ontario and Quebec (in Can. Pacific system).			25,000 00			
" Merrickville	"			10,000 00			
Township of West Winchester	"			15,000 00			

" Thamesford	"			2,500 00			
					52,500 00		
Town of Port Arthur	Ontario and Rainy River				50,000 00		
City of Ottawa	Ottawa, Arnprior and Parry Sound (now Canada Atlantic).			150,000 00			
Township of Huntley	" "			2,900 00			
" Hagarty	" "					2,000 00	
Town of Arnprior	" "					30,000 00	
					152,900 00		32,000 00
Town of Pembroke	Pembroke Southern				20,000 00		
" Port Arthur	Port Arthur, Duluth and Western (now in Canadian Northern).			25,000 00			
Municipality of Neebing	" "			15,000 00			
					40,000 00		
Township of Russell	Ottawa and New York			10,000 00			
City of Ottawa	"			75,000 00			
					85,000 00		
Township of King	Shomberg and Aurora				12,000 00		
Town of Simcoe	South Norfolk (in Grand Trunk system).			5,000 00			
Township of Charlotteville	"			20,000 00			
" South Walsingham	"			40,000 00	65,000 00		
City of Ottawa	St. Lawrence and Ottawa	200,00 00				60,000 00	
Town of Prescott	" "	100,00 00				30,000 00	
			300,000 00				90,000 00
" Gananoque	Thousand Islands				10,000 00		
Township of Bayham	Tilsonburg, Lake Erie and Pacific.			35,000 00			
" Malahide	" "			4,000 00			
" Houghton	" "			3,000 00			
Town of Tilsonburg	" "			10,000 00			
Village of Vienna	" "			3,000 00			
Town of Ingersoll	" "			20,000 00			
					75,000 00		
City of Toronto	Toronto and Nipissing (in Grand Trunk system).			150,000 00			
Township of Scarboro'	" "			10,000 00			
" Markham	" "			30,000 00			
" Uxbridge	" "			50,000 00			
" Scott	" "			10,000 00			
" Brock	" "			50,000 00			
" Eldon	" "			14,000 00			
" Bexley	" "			15,000 00			
" Somerville	" "			15,000 00			
Townships of Luxton, Digby and Langford	" "			12,500 00			
Town of Uxbridge	" "			2,000 00			
					*376,702 59		

* Amount returned has realized, balance has lapsed, see return of 1875.

No. 11.—Statement of Aid granted to Railways by Municipalities—*Continued.*

Municipalities.	Name of Railway	Loan.	Total.	Bonus.	Total.	Subscriptions to Shares or Bonds.	Total.
Ontario—*Con.*		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Township of Albion	Toronto, Grey and Bruce (in Can. Pac. system)			40,000 00			
" Caledon	" "			45,000 00			
" Mono	" "			45,000 00			
" Amaranth	" "			30,000 00			
" Arthur	" "			35,000 00			
Town of Orangeville	" "			15,000 00			
" Mount Forest	" "			20,000 00			
City of Toronto	" "			350,000 00			
County of Grey (Group)	"			300,000 00			
Town of Owen Sound	" "			5,000 00			
Township of Minto	" "			15,000 00			
" Howick	" "			35,000 00			
Townships of Gorrie and Wroxeter	" "			5,000 00			
Village of Teeswater	" "			5,000 00			
Township of Culross	" "			38,000 00			
" Turnbury	" "			5,000 00			
	Toronto, Hamilton and Buffalo, comprising Brantford, Waterloo and Lake Erie				988,000 00		
City of Brantford	" "			25,000 00			
Township of Oakland	" "			9,000 00			
" Waterford	" "			2,500 00			
City of Hamilton	" "			225,000 00			
Township of South Grimsby	" "			4,000 00			
					265,500 00		
Town of Lindsay	Victoria (in Grand Trunk system)			85,000 00			
Village of Fenelon Falls	" " "			25,000 00			
Townships of Verulam and Somerville	" " "			22,000 00			
County of Haliburton	" " "			54,000 00			
					186,000 00		
Township of Woolwich	Waterloo Junction (in Grand Trunk system)			28,000 00			
Section of Peel	" "			7,000 00			
Village of Elmira	" "			10,000 00			
" St. Jacobs	" "			2,000 00			
					47,000 00		

Fergus	Wellinton, Grey and Bruce			10,000 00		
Peel	" "			40,000 00		
Elora	" "			10,000 00		
Maryboro'	" "			40,000 00		
Nichol	" "			10,000 00		
Wallace	" "			35,000 00		
Minto	" "			55,000 00		
Bruce	" "			278,000 00		
Howick	" "			20,000 00		
Listowel	" "			15,000 00		
Grey	" "			35,000 00		
Elma	" "			30,000 00		
Morris	" "			30,000 00		
W. Wawanosh	" "			18,000 00		
Ashfield	" "			10,000 00		
Turnbury	" "			28,000 00		
Kincardine	" "			8,000 00		
					682,000 00	
City of London	West Ontario Pacific				25,000 00	
Town of Whitby	Whitby, Port Perry and Lindsay (in Grand Trunk system)			70,000 00		
Township of Whitby	" "			15,000 00		
" Reach	" "			30,000 00		
" Scugog	" "			2,000 00		
County of Victoria	" "			85,000 00		
Village of Port Perry	" "			20,000 00		
Manufacturing Co	" "			94 93		
					222,094 93	
			1,632,854 00			
QUEBEC.					10,102,843 80	1,211,500 00
Caplin	Baie des Chaleurs (now in Atlantic and Lake Superior system)			5,000 00		
New Richmond	"			6,000 00		
Maria	"			6,000 00		
Carleton	"			6,000 00		
Nouvelle and Shoolbred	"			6,000 00		
New Carlisle	"			6,000 00		
Paspebiac	"			3,000 00		
Hamilton	"			2,500 00		
					40,500 00	
Parish of St. Antoine	Great Eastern			10,000 00		
" St. Denis	"			10,000 00		
					20,000 00	
Village St. Andrews	Ottawa Valley (in Atlantic & Lake Superior)				10,000 00	
Farnham	Canadian Pacific				20,000 00	
Town of Nicolet	Drummond County (now in Intercolonial Ry.)			10,000 00		
Municipality of St. Leonard	"			5,000 00		
					15,000 00	

No. 11.—STATEMENT of Aid granted to Railways by Municipalities—*Continued.*

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscriptions to Shares or Bonds.	Total.
QUEBEC—*Continued.*		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Parish of St. Sophie	Great Northern of Canada			4,000 00			
Village of New Glasgow	" "			2,000 00			
" St. Elizabeth	" "			6,000 00			
Town of Joliette	" "			35,000 00	47,000 00		
City of Three Rivers	Lower Laurentian (in Great Northern)				25,000 00		
City of Quebec	Great Northern of Canada						200,000 00
County of Compton	International, now in Atlantic and North-west, C.P.R.						225,000 00
Township of Melbourne and Brompton Gore	Missisquoi & Black Riv. Valley, now in Atlantic & North-west, C.P.R.					25,000 00	
Township of Ely	" "					25,000 00	
Township of North Stukely	" "					25,000 00	
" Bolton	" "					25,000 00	
							100,000 00
St. Pie	Lake Champlain and St. Lawrence J (leased to Montreal and Atlantic Ry.)			20,000 00			
L'Ange Gardien	" "			10,000 00			
St. Paul	" "			6,000 00			
Philipsburg	" "			15,000 00			
					51,000 00		
Town of L'Assomption	L'Assomption				1,500 00		
Ascot	Massawippi Valley					40,000 00	
Hatley	"					25,000 00	
							65,000 00
Ormstown	Montreal & Champlain Junction—(Grand Trunk)			10,000 00			
St. Constant	" "			1,800 00			
Ste. Philomène	" "			2,820 00			
Laprairie	" "			1,904 00			
Huntingdon	" "			3,000 00			
St. Isidore	" "			1,500 00			
Dewittsville	" "			750 00			
					21,774 00		
Municipality of Rigaud	Montreal and Ottawa			2,000 00			

Parish of Rigaud	"			800 00			
Point Fortune	"			2,500 00			
	Montreal and Province line, formerly				5,300 00		
Chambly Canton	Montreal, Portland and Boston			15,000 00			
Basin	" "			10,000 00			
					25,000 00		
County of Pontiac	Pontiac Pacific Jct. (now in Ottawa, Northern & Western)			100,000 00			
Village of Shawville	" "			1,000 00			
					101,000 00		
City of Sherbrooke	Quebec Central			50,000 00			
Parish of Dudswell	"			25,000 00			
" Weedon	"			25,000 00			
Township of Garthby	"			3,000 00			
					103,000 00		
City of Quebec	Quebec Bridge				300,000 00		
City of Quebec	Quebec and Lake St. John					450,000 00	450,000 00
Town of Chicoutimi	" "				12,000 00		
City of Montreal	Quebec, Montreal, Ottawa and Occidental	1,000,000 00					
City of Quebec	" "	1,000,000 00					
" Three Rivers	" "	100,000 00					
County of Ottawa	" "	200,000 00					
St. Sauveur de Québec	" "	25,000 00					
Côte St. Louis	" "	25,000 00					
Village of Ste. Thérèse	" "	12,000 00					
Parish of "	" "	12,000 00					
" St. Jérôme	" "	10,000 00					
Village "	" "	15,000 00					
Ste. Scholastique	" "	10,000 00					
St. Andrews	" "	25,000 00					
St. Jérusalem d'Argenteuil	" "			25,000 00			
			2,434,000 00		25,000 00		
County of Brome	South-eastern (now Montreal and Atlantic)					50,000 00	
Township of Brome	" "					50,000 00	
" Sutton	" "					63,000 00	
" Potton	" "					25,000 00	
" Farnham	" "					20,000 00	
Village of West Farnham	" "					5,000 00	
" East "	" "					5,000 00	
" Waterloo	" "					30,000 00	
" Drummondville	" "					15,000 00	
County of Drummond	" "					90,000 00	
Township of Wickham	" "					10,000 00	
" St. Germain	" "					15,000 00	
" Sorel	" "					40,000 00	
Village of Actonvale	" "					15,000 00	
" Roxton Falls	" "					15,000 00	
Township of Roxton	" "					20,000 00	

No. 11.—Statement of Aid granted to Railways by Municipalities—*Concluded.*

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec—*Concluded.*							
Township of Shefford	South-eastern (now Montreal and Atlantic)					50,000 00	
" West Wickham	" "					10,000 00	
City of Sorel	South Shore, formerly Mont. & Sorel				25,000 00		528,000 00
Fraserville	Témiscouata				25,000 00		
			2,434,000 00		873,074 00		1,568,000 00
New Brunswick.							
Hillsboro', Hopewell and Harvey Parishes	Albert, now Salisbury and Harvey			40,000 00			
Coverdale, Hillsboro', Hopewell and Harvey Parishes	"			30,000 00			
					70,000 00		
City of St. John	Canadian Pacific				40,000 00		
" Fredericton	Fredericton			50,000 00			
County of York	"			30,000 00			
					80,000 00		
Parish of St. George	Grand Southern, now New Brunswick Southern			2,000 00			
" Pennfield	" "			500 00			
Lepreau	" "			500 00			
					3,000 00		
Town of Fort Fairfield	New Brunswick			12,000 00			
" Lyndon	"			11,000 00			
					23,000 00		
City of Calais	New Brunswick and Canada			12,500 00			
" Houlton	" "			22,000 00			
" St. Stephen	" "			13,000 00			
					47,500 00		
Parish of Elgin	Elgin and Havelock				13,000 00		
Town of Campbellton	Restigouche and Western—now International of New Brunswick				5,000 00		
City of St. John	St. John and Maine						60,000 00
					281,500 00		60,000 00

NOVA SCOTIA.							
County of King	Cornwallis Valley (now in Dominion Atlantic)				27,685 00		
Counties of Yarmouth, Digby and Annapolis	Western Counties) Yarmouth and Annapolis (now in Dominion Atlantic)				150,000 00		
Town of Truro	Midland of N.S.			30,000 00			
County of Colchester	"			6,000 00			
County of Pictou	New Glasgow Iron, Coal and Railway Co., (now Nova Scotia Steel Co's Ry.)				36,000 00		
					4,000 00		
Argyle	Halifax & Yarmouth			5,000 00			
Barrington	" "			2,952 46			
Town of Yarmouth	" "			5,922 47			
Yarmouth County	" "			4,764 00			
					15,389 93		
County of Inverness	Inverness & Richmond (now Inverness Ry. and Coal Co.)				100,000 00		
					333,023 93		
MANITOBA.							
City of Winnipeg	Canadian Pacific			200,000 00			
County of Selkirk	"			35,000 00			
Township of St. Andrews	"			35,000 00			
Town of Morris	"			100,000 00			
					370,000 00		
County of Westborne	Manitoba and North-western			75,000 00			
Town of Portage la Prairie	" "			50,000 00			
" Minnedosa	" "			30,000 00			
Municipality of Shoal Lake	" "			20,000 00			
" Birtle	" "			40,000 00			
" Strathclair	" "			600 00			
					215,600 00		
Rapid City	Saskatchewan and Western				10,000 00		
					595,600 00		
BRITISH COLUMBIA.							
City of New Westminster	Canadian Pacific				37,500 00		
NORTH-WEST TERRITORIES.							
Calgary	Canadian Pacific				25,000 00		
Total aid granted by municipalities			4,066,854 00		12,218,541 73		2,839,500 00

NOTE.—For statement of payments of Municipal Aid granted to Railways—See No. 1 Summary statement of Capital.

No. 12.—Summary Statement of Aid granted to Steam Railways constructed, and under construction by Governments and Municipalities—June 30—1904.

—	Loan.	Total.	Bonus.	Total.	Subscription to shares or Bonds.	Total.	Grand Total.	
Governments.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
Dominion	15,964,258 61		172,433,055 78				188,397,314 39	
Ontario	26,000 00		8,896,378 04				8,922,378 04	
Quebec	3,722,956 00		13,846,133 08				17,569,089 08	
New Brunswick			4,563,012 71		300,000 00		4,863,012 71	
Nova Scotia			3,065,087 45				3,065,087 45	
Manitoba	900,000 00		1,016,952 75				1,916,952 75	
British Columbia			37,500 00				37,500 00	
		20,613,214 61		203,858,119 81		300,000 00		224,771,334 42
Municipalities.								
Ontario	1,632,854 00		10,102,843 80		1,211,500 00		12,947,197 80	
Quebec	2,434,000 00		873,074 00		1,568,000 00		4,875,074 00	
New Brunswick			281,500 00		60,000 00		341,500 00	
Nova Scotia			333,023 93				333,023 93	
Manitoba			595,600 00				595,600 00	
British Columbia			37,500 00				37,500 00	
North-west Territories			25,000 00				25,000 00	
		4,066,854 00		12,248,541 73		2,839,500 00		19,154,895 73
		24,680,068 61		216,106,661 54		3,139,500 00		243,926,230 15

No. 1.—Summary Statement of Capital of Electric Railways for the Year ended June 30, 1904.

No. 12.—Summary Statement of Aid granted to Steam Railways constructed, and under construction by Governments and Municipalities—June 30—1904.

ELECTRIC RAILWAY STATISTICS

OF THE

DOMINION OF CANADA

FOR THE YEAR ENDED JUNE 30, 1904

SESSIONAL PAPER No. 20

SUMMARY of Tables of Electric Railways for the years ended June 30, 1903, and June 30, 1904.

Comparative Statement.

	June 30, 1903.	June 30, 1904.
Miles of railway completed (track laid)	759	767
" sidings	32	33
" iron rails in main line	7	22
" steel " "	752	745
" " " double track	185	188
Capital paid (including the three following items)	47,274,853	50,399,188
Government (Dominion and Provincial) bonuses paid	156,800	60,800
Municipal aid paid	173,000	173,000
Miles in operation	759	767
Gross earnings	7,233,677	8,453,609
Working expenses	4,472,858	5,326,517
Net earnings	2,760,819	3,127,092
Passengers carried	155,662,812	181,689,998
Freight carried (tons)	371,286	400,161
Car mileage	38,028,529	42,066,124
Passengers killed	10	10
Number of highway crossings at rail-level with watchman	7	10
" " " without "	307	286
" overhead bridges highway crossings over railway	16	17
" " farm crossings		
" highway crossings under railway	11	9
" farm " "		
" level crossings of other railways	89	102
" junctions with other railways	42	42
" " branch lines	13	7
" power houses (steam power) owned	28	30
" " " hired	2	
" " (water power) owned	11	9
" " " hired	4	3
" passenger cars (motor) owned	*2,027	2,137
" " " hired	6	
" " (trailers) owned	290	223
" " " hired		
" official cars owned		1
" " hired		
" locomotives owned	1	2
" " hired		
" baggage, mail and express cars owned	11	13
" " " " hired		
" cattle and box freight cars owned	†15	†15
" " " " hired		
" platform cars owned	70	**77
" " hired		
" tool cars owned	16	13
" " hired		
" snow ploughs owned	26	‡79
" " hired		
" snow sweepers owned	71	33
" " hired		
" other rolling stock owned		

* Three are official cars. † Includes one conductor's van.

† Includes one conductor's van.
** Includes two coal cars.
‡ Includes snow sweepers.

ELECTRIC RAILWAY STATISTICS.

Mileage in Provinces for the Year ending June 30, 1904.

	Miles.
Ontario	375·74
Quebec	253·97
New Brunswick	13·00
Nova Scotia	44·79
Manitoba	28·00
British Columbia	51·00
Total	766·50

ELECTRIC RAILWAYS.

Nominal Capital paid up June 30, 1901.

Provinces.	Miles constructed.	Ordinary Share Capital.	Preference Share Capital.	Bonded Debt.	Dominion Government Aid.	Provincial Government Aid.	Municipal Aid.	Capital from other Sources.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Ontario	375·74	12,855,612 86	250,000 00	9,129,625 49	60,800 00		173,000 00	101,178 00	22,570,216 35
Quebec	253·97	9,563,600 00	425,700 00	4,741,333 00					14,730,633 00
New Brunswick	13·00	707,860 00		675,000 00					1,382,860 00
Nova Scotia	44·79	2,117,000 00	234,000 00	1,462,000 00					3,813,060 00
Manitoba	28·00	1,500,000 00		1,000,000 00					2,500,000 00
British Columbia	51·00	1,271,999 00	1,338,333 00	2,286,292 00				505,855 00	5,402,179 00
Totals	766·50	28,016,071 86	2,248,033 00	19,294,250 49	60,800 00		173,000 00	607,033 00	50,399,188 35

No. 2.—Summary Statement of the different descriptions

Number.	Name of Electric Railway.	Length of Line.		No. of Power Houses.				Passenger Cars.			
				Steam Power		Water Power		No. Motor Cars.		No. of Trailer Cars owned.	No. of Official Cars owned.
		Completed.	Under Construction	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.		
1	Berlin and Waterloo..... 3·02 Leased Line—Berlin and Bridgeport ..... 2·50	5·52	.....	*	.....	.....	....	7	....	7	....
2	Brantford Street.	7·00	.....	1	.....	.....	.....	12	.....	.....	.....
3	British Columbia.....	48·00	.....	2	.....	.....	2	69	.....	.....	.....
4	Cape Breton.	11·80	....	2	.....	.....	.....	9	.....	.....	.....
5	Cornwall Street.....	6·00	.....	1	.....	1	.....	8	.....	.....	.....
6	Egerton Tramway Co., N.S. (not in operation).....	.....	8·50	.....	.....	.....	.....	.....	.....	.....	.....
7	Galt, Preston and Hespeler. 9·00 Leased Line—Preston to Berlin .... 7·00	16·00	.....	1	.....	.....	.....	12	.....	5	.....
8	Grand Valley (Brantford to Paris)..	6.00	14·00	*	.....	.....	.....	8	.....	.....	.....
9	Guelph Radial.	5·50	.....	1	.....	.....	.....	6	.....	3	.....
10	Halifax Tramway.....	12·13	.....	1	.....	.....	.....	40	.....	6	.....
11	Hamilton and Dundas..... ...	7·25	.....	.....	*	.....	.....	4	.....	.....	.....
12	Hamilton, Grimsby and Beamsville.	27·50	.....	1	.....	.....	.....	9	.....	.....	.....
13	Hamilton Radial	12·00	.....	1	.....	.....	.....	12	.....	.....	.....
14	Hamilton Street.....	22·00	.....	.....	*	.....	.....	50	.....	.....	.....
15	Hull.....	14·50	.....	.....	.....	1	.....	17	.....	4	.....
16	International Transit Co. (Sault Ste. Marie)	3·30	.....	.....	.....	.....	1	5	.....	3	.....
17	Kingston, Portsmouth and Cataraqui	7·50	.....	.....	1	.....	.....	23	.....	.....	.....
18	Lévis County.....	10·25	.....	.....	.....	.....	1	10	.....	.....	.....
19	London Aylmer and North Shore (not under construction)..... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	London Street...	31·00	.....	1	.....	.....	.....	35	.....	5	.....
21	Metropolitan (Toronto)..... . ..	29·00	.....	2	.....	.....	.....	19	.....	.....	.....
22	Montreal, Park and Island.....	37·99	.....	2	.....	.....	.....	41	.....	.....	.....
23	Montreal Street.....	123·67	.....	1	.....	.....	.....	736	.....	.....	1
24	Montreal Terminal.....	18·34	.....	1	.....	1	.....	30	.....	.....	.....
25	Morrisburg (not under construction)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Nelson Tramway, B.C.....	3·00	.....	.....	*	.....	.....	2	.....	.....	.....
27	Niagara Falls, Park and River.....	13·68	.....	1	.....	1	.....	25	.....	16	.....
28	Niagara, St. Catharines and Toronto	19·94	.....	.....	.....	1	.....	13	.....	.....	.....
29	Niagara Falls, Wesley Park, Clifton (formerly Wesley Park and Clifton)	4·50	.....	.....	*	.....	.....	6	.....	.....	.....
30	Oshawa	8·02	.....	1	.....	.....	.....	8	.....	1	.....
31	Ottawa.....	22·87	.....	.....	.....	1	.....	99	.....	4	.....
32	Ottawa River Ry. (not under construction)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	Port Arthur Street..	9·00	.....	1	.....	1	.....	7	.....	4	.....
34	Port Dalhousie, St. Catharines and Thorold.....	6·82	.....	.....	.....	.....	.....	8	.....	.....	.....
35	Quebec Railway, Light and Power Co. (Citadel Division).....	17·22	.	.....	.....	1	.....	63	.....	.....	..
36	Quebec Railway, Light and Power Co. (Montmorency Division).....	25·00	.....	.....	.....	.....	1	10	.....	.....	.....
37	Sandwich, Windsor and Amherstburg	23·15	.....	1	.....	.....	.....	26	.....	4	.....
38	Sherbrooke Street..	7·00	.....	.....	.....	1	.....	11	.....	.....	.....
39	Saint John, N.B.....	13·00	.....	1	.....	.....	.....	29	.....	.....	.....
40	Sarnia	4·50	.....	*	*	.....	.....	6	.....	2	.....
41	South-western Traction Co. (not in operation)...	.....	24·00	.....	.....	.....	.....	.....	.....	.....	.....
42	Sydney and Glace Bay	18·80	.....	1	.....	.....	.....	10	.....	.....	.....
43	St. Thomas, Ont.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Toronto Suburban.....	8·50	.....	1	.....	.....	.....	6	.....	.....	.....
45	Toronto and Mimico.....	5·87	.....	.....	*	.....	.....	9	.....	.....	.....
46	Toronto Street.....	46·75	.....	2	.....	.....	.....	516	.....	131	.....
47	Toronto and Scarboro	5·07	.....	.....	*	.....	.....	8	.....	.....	.....
48	Winnipeg Street.	28·00	.....	1	.....	.....	.....	63	.....	27	.....
49	Woodstock, Thames Valley and Ingersoll.....	11·50	.....	1	.....	.....	.....	7	.....	.....	.....
50	Yarmouth.....	2·06	.....	1	.....	.....	.....	3	.....	1	.....
		766·50	46·50	30	1	9	5	2,137	..	223	1

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of Rolling Stock for the Year ended June 30, 1904.

No. of Electric Locomotives owned.	No. of Baggage, Mail and Express Cars owned.	No. of Cattle and Box Freight Cars owned.	No. of Platform Cars owned.	No. of Coal and Dump Cars owned.	No. of Conductors' Vans owned.	No. of Tool Cars owned.	No. of Snow Ploughs owned.	No. of Snow Sweepers owned.	Number.	Remarks
						1			1	*Power purchased from Berlin Light Commissioners.
		4	2					1	2	
						2	*5		3	*Sweepers included.
							1		4	
1			2				1	1	5	
									6	
1		3	1						7	
									8	*Power hired from Brantford Street Ry.
	1								9	
							3		10	
			1						11	*Power furnished by the Cataract Power Co.
		4	4				1		12	
			1					1	13	
							1	2	14	*Power rented from the Cataract Power Co.
	1							2	15	
								1	16	
								2	17	*Includes one motor freight car.
	1		1				4		18	
									19	
							1	1	20	
	4		5						21	
		1	16			2	*3		22	*Includes sweepers.
			17			3	*28		23	*Includes sweepers.
			2				*4		24	*Includes sweepers.
									25	
									26	*One sub-station.
	1		2						27	
		1	15		1		1	1	28	
									29	*Power supplied by the Niagara, St. Catharines and Toronto Electric Ry.
	2			2					30	
	3					*1	†9		31	*Salt car. †Including sweepers.
									32	
			2			2	3		33	
									34	
						1	2	6	35	
									36	
			3			1	2		37	
							1		38	
							*5		39	*Sweepers included.
									40	*Power hired.
									41	
							1		42	
									43	No return received.
								1	44	
									45	*Power hired.
		1	1				*2	13	46	Sweepers included.
									47	*Power hired.
			1				1		48	
									49	
								1	50	
2	13	14	75	2	1	13	79	33		

No. 3.—Summary Statement of Characteristics of

Number.	Name of Electric Railway.	Length of Line. Completed. (Rails laid).	Under construction.	Iron Rails.	Steel Rails.	Length of Siding.	Length of Double Track.	Weight per Yard. Iron Rails.	Weight per Yard. Steel Rails.	Number of Ties to Mile.
								Lbs	Lbs.	
1	Berlin and Waterloo 3·02 / Leased line—Berlin & Bridgeport 2·50	5·52	.. ..	.....	5·52	...	.. ..	....	45, 60 & 65	2640
2	Brantford Street	7·00	.....	.....	7·00	.. .	.....	....	56	2400
3	British Columbia	48·00	.....	.....	48·00	.....	7·50	..	25,40,56,70 / 72 & 110,38	2640
4	Cape Breton	11·80	.....	.....	11·80	·36	.....	....	60	2640
5	Cornwall Street	6·00	.....	.....	6·00	·50	.....	...	56	....
6	Egerton Tramway Co., N.S. (not in operation)	.....	8·50	.....	.....	.....	.	....	.....	....
7	Galt, Preston and Hespeler 9·00 / Leased Line, Preston to Berlin 7·00	16·00	....	4·50.	11.50	...	.....	....	56	2112
8	Grand Valley (Brantford to Paris)	6·00	14·00	.....	6·00	.....	.....	.....	52	2400
9	Guelph Radial	5·50	.....	.....	5·50	·33	.....	....	56 & 60	2640
10	Halifax Tramway	12·13	...	...	12·13	·64	1·58	....	60 & 80	....
11	Hamilton and Dundas	7·25	.....	.....	7·25	.....	.....	....	60	2600
12	Hamilton, Grimsby and Beamsville	27·50	.....	.....	27·50	2·00	.....	....	50 & 65	2347
13	Hamilton Radial	12·00	.. .	...	12·00	·50	.....	....	65	2640
14	Hamilton Street	22·00	.....	.....	22·00	...	10·50	...	60	2640
15	Hull	14·50	.....	.....	14·50	2·00	10·00	....	56	2640
16	International Transit Co., (Sault Ste. Marie)	3·30	.....	.....	3·30	·26	.....	....	80	2640
17	Kingston, Portsmouth and Cataraqui	7·50	.....	.....	7·50	.....	.....	....	56 & 60	2600
18	Lévis County	10·25	.....	.....	10·25	·63	.....	...	60	2640
19	London, Aylmer & North Shore (not under construction	.....	.....	.....	.....	.....	.....	....	.....	....
20	London Street	31·00	.....	...	31·00	.....	11·68	...	73 & 56	2640
21	Metropolitan (Toronto)	29·00	.....	.....	29·00	..	..	....	56	2640
22	Montreal Park and Island	37·99	.....	.....	37·99	2·05	12·75	...	56	2640
23	Montreal Street	123·67	.....	.....	123·67	9·12	49·24	.. .	56 to 96	2640 / 880
24	Montreal Terminal	18·34	.....	.....	18·34	1·50	....	....	56, 65, 80	2640
25	Morrisburg (not under construction)	.....	.....	.....	.....	.....	.....	...	.....	....
26	Nelson Tramway, B.C	3·00	.....	...	3·00	.25	.	....	60 & 45	2640
27	Niagara Falls, Park and River	13·68	.....	...	13·68	·89	11 43	...	56	2640
28	Niagara, St. Catharines and Toronto	19·94	.....	17·79	2·15	...	.....	56	56	2640
29	Wesley Park and Clifton (now, Niagara Falls, Wesley Park and Clifton)	4·50	.....	.....	4·50	.....	.....	.. .	60	2640
30	Oshawa	8·02	.....	.....	8·02	....	.....	....	64	2640
31	Ottawa	22·87	.....	.....	22·87	.....	17·95	....	40,52 to 72	2630
32	Ottawa River Ry (not under construction)	.....	.....	.....	.....	.....	.....	....	.....	....
33	Port Arthur Street	9·00	.....	.....	9·00	·43	....	...	42 & 56	2640
34	Port Dalhousie, St. Catharines and Thorold	6·82	..	.....	6·82	..	.....	....	50	2640
35	Quebec Railway, Light and Power Co. (Citadel Division)	17·22	.....	.....	17·22	. ....	5·00	....	56 & 72	2640
36	Quebec Railway, Light and Power Co. (Montmorency Division)	25·00	. .	.....	25·00	4·50	6·00	....	56 & 70	2640
37	Sandwich, Windsor and Amherstburg	23·15	.....	.....	23·15	.....	.....	....	60 & 85	1800
38	Sherbrooke Street	7·00	.....	.....	7·00	.	.....	....	60	2000
39	St. John, N.B.	13·00	.....	.....	13·00	....	.....	...	74	2464
40	Sarnia	4·50	.....	.....	4·50	..	.....	....	45, 56 & 66	2112
41	South-western Traction Co. (not in operation	....	24·00	.....	.....	.....	.....	....	.....	....
42	Sydney and Glace Bay	18·80	.....	.....	18·80	·33	. .	....	60	2640
43	St. Thomas, Ont	...	...	.....	...	...	...	....	.....	....
44	Toronto Suburban	8·50	.....	.....	8·50	....	.....	....	56 & 72	....
45	Toronto and Mimico	5·87	.....	.....	5·87	·39	.....	....	56	....
46	Toronto Street	46·75	.....	....	46·75	5·75	44 77	....	69,73,84,90	....
47	Toronto and Scarboro	5·07	..	.....	5·07	·09	.....	....	56	....
48	Winnipeg Street	28·00	...	.....	28·00	.....	.....	...	70 & 56	2000
49	Woodstock, Thames Valley and Ingersoll	11·50	.....	.....	11·50	.....	.....	...	56 & 65	2100
50	Yarmouth	2·06	.....	.....	2·06	.....	.....	....	45	2112
	Total.	766·50	46·50	22·29	744·21	32·50	188·40	....	.....	....

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Roads, &c., for the Year ended 30th June, 1904.

Nature of Rail Fastening.	No. of Grain Elevators.	No. of Highway cros'gs at rail level.		No. of overhead Bridges.	Height of overhead bridges above rail level.	No. of h'wy c'gs under r'y.	No. of farm crossings under railway.	Level crossings of other Railways.	No. of Junctions with other Railways.	No. of Junctions with Branch Lines.	Radius of sharpest curve.	No. of feet per mile of heaviest gradient.	Gauge of Railway.	Number.	Remarks.
		Guarded.	Not Guarded.		Ft.						Ft.				
Fish plates			3					2	1		50	150	4·8½	1	
"			6					1	1		50	253	4·8½	2	
Fish plates and angle bars								7	1		27	630	4·8½	3	
Not given								3			58	348	4·71	4	
Fish plates and bolts											50	100	4·8½	5	
														6	
Straight ties			11					1	1		72	264	4·8½	7	
Atlas joints			6								75		4·8½	8	
Fish plates and bolts		1	1					2			45	8	4·8½	9	
Not given											30	581	4·8½	10	
Angle bars			1	1	14½			2	2		38	158	4·8½	11	
Fish plates and angle bars			42						1		127	211	4·8½	12	
Angle bars		2	2	2	16			5	2		105	158	4·8½	13	
Fish plates								4	1		40	370	4·8½	14	
"			7					3	2	3	193	264	4·8½	15	
Bonanza joints								2	1		50	20	4·8½	16	
Angle fish plates			55					1	1	3	35	1000	4·8½	17	
Six-bolt angle bars								1			46	686	4·8½	18	
														19	
Plates and angle bars		3	2	1							40	5	4·8½	20	
Angle bars				1	22				1		15	455	4·8½	21	
Fish plates and angle bars								5	4		50	264	4·8½	22	
Angle bars				4	29½	3		15	6		40	633	4·8½	23	
Fish plates															
Angle plate			11					12	1		45	422	4·8½	24	
														25	
Fish plates											60	633	4·8½	26	
Standard angle bar plates		1	16	2	14&22				2	1	115	300	4·8½	27	
Continuous rail joints			35	3	22	6		2	2		50	182	4·8½	28	
Continuous rail joints		1	19					1	2		50	150	4·8½	29	
Angle iron			28					1	1		80	211	4·8½	30	
Fish plates and angle bars				1	17			5	2		35	422	4·8½	31	
														32	
Fish plates								1			30	2	4·8½	33	
Continuous rail joint			25	2	25			1	1		50	150	4·8½	34	
Plain and angle fish plates		1						1			35	752	4·8½	35	
" "			10					1	2		1433	42	4·8½	36	
Fish plates								1			45	10	4·8½	37	
"								2			96	739	4·8½	38	
Heavy angle bars and bolts								1			40	475	4·8½	39	
Fish plates			1										4·[illegible]	40	
														41	
Angle iron											58	8	4·7	42	
														43	No ret. recd.
Not given								4	1		35	422	4·10½	44	
"											65	264	4·10½	45	
"								5	2		40	264	4·10½	46	
"									1		65	211	4·10½	47	
Angle bars								8			31	1	4·8½	48	
Fish plates			5					1			50	290	4·8½	49	
Angle iron and fish plates		1						1				50	4·8½	50	
		10	286	17		9		102	42	7					

No. 4.—Summary Statement of the Operations of the

Number.	Name of Electric Railway.	Mileage.	Car Mileage.			Locomotive Mileage.
			Passenger Cars.	Freight Cars.	Total Car Mileage.	
1	Berlin and Waterloo 3·02 Leased Line—Berlin and Bridgeport.. 2·50	5·52	94,180	.....	94,180	....
2	Brantford Street	7·09	80,400	.....	80,400	.... ..
3	British Columbia	48·00	1,867,580	43,732	1,911,312	.....
4	Cape Breton	11·80	294,354	.....	294,354	....
5	Cornwall Street	6·00	172,233	12,109	184,342	....
6	Galt, Preston and Hespeler 9·00 Leased Line—Preston to Berlin ..... 7·00	16·00	135,310	12,350	147,660	.....
7	Grand Valley, (Brantford to Paris)..	6·00	68,664	.....	68,664	....
8	Guelph Radial	5·50	210,000	1,400	211,400	.....
9	Halifax Tramway	12·13	715,470	.....	715,470	.....
10	Hamilton and Dundas	7·25	74,483	.....	74,483	.....
11	Hamilton, Grimsby and Beamsville	27·50	215,662	18,970	234,632	..... .
12	Hamilton Radial	12·00	203,473	.....	203,473	.....
13	Hamilton Street	22 00	1,261,984	.....	1,261,984	.....
14	Hull	14·50	475,314	14,628	489,942	14,628
15	International Transit, (Sault Ste. Marie)	3·30	163,648	.....	163,648	.. ..
16	Kingston, Portsmouth and Cataraqui	7·70	80,011	.....	80,011	.....
17	Lévis County	10·25	219,388	.....	219,388	....
18	London Street	31·00	1,198,642	.....	1,198,642	.....
19	Metropolitan (Toronto)	29·00	250,000	.....	250,000	.. ..
20	Montreal, Park and Island	37·99	675,503	10,920	686,423	.....
21	Montreal Street	123·67	12,080,791	.....	12,080,791	.....
22	Montreal Terminal	18·34	564,080	.....	564,080	20,576
23	Morrisburg, (not under construction)	.....	.....	.....	.....	....
24	Nelson Tramway, B.C	3·00	34,330	.....	34,330	.....
25	Niagara Falls, Park and River	13·68	301,258	18,580	319,838	....
26	Niagara, St. Catharines and Toronto	19·94	216,782	297,673	514,455	.....
27	Niagara Falls, Wesley Park and Clifton, (formerly Wesley Park and Clifton)	4·50	141,835	.....	141,835	.....
28	Oshawa	8·02	36,416	19,356	55,772	.....
29	Ottawa	22·87	2,353,729	.....	2,353,729	....
30	Port Arthur Street	9·00	157,223	.....	157,223	.....
31	Port Dalhousie, St. Catharines and Thorold...	6·82	104,829	.....	104,829	..... .
32	Quebec Ry., Light and Power Co. (Citadel Div.)	17·22	1,138,546	.....	1,138,546	....
33	" " " (Montmorency Div.)	25·00	170,849	.....	170,849	.....
34	Sandwich, Windsor and Amherstburg	23·15	541,779	.....	541,779	.....
35	Sherbrooke Street	7·00	370,353	.....	370,353	.....
36	St. John, N.B	13·00	520,173	.....	520,173	....
37	Sarnia Street	4·50	82,632	.....	82,632	....
38	South-Western	.....	.....	.....	.....	.....
39	Sydney and Glace Bay	18·80	331,900	.....	331,900	.....
40	St. Thomas Street	.....	.....	.....	.....	.....
41	Toronto Suburban	8·50	163,748	.....	163,748	....
42	Toronto and Mimico	5·87	175,580	.....	175,580	....
43	Toronto Street	46·75	11,808,389	.....	11,808,389	.. ..
44	Toronto and Scarboro	5·07	179,702	.....	179,702	.....
45	Winnipeg Street	28·00	1,513,458	.....	1,513,458	.....
46	Woodstock, Thames Valley and Ingersoll	11·56	91,805	.....	91,805	....
47	Yarmouth	2·06	79,920	.....	79,920	....
	Totals	766·50	41,616,406	449,718	42,066,124	35,204

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Year and Mileage for the Year ended June 30, 1904.

Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs., Handled.	Average Rate of Speed of Passenger Cars. Miles per Hour.	Average Rate of Speed of Freight Cars. Miles per Hour.	Number.	Remarks.
536,000		7		1	
228,810		10		2	
8,869,486	6,066	8	8	3	
1,266,862		5		4	
278,761		12	5	5	
382,901	30,831	10	6	6	
203,134	15	15		7	
488,932	8,000			8	
3,369,280		6		9	
337,273	1,310	14		10	
355,622	6,644	15	15	11	
715,235	2,600	25		12	
5,265,748		12		13	
869,201	27,753	25	25	14	
556,206	883	8		15	
641,121		9	5	16	
978,992		8		17	
4,104,719		9		18	
521,083		20		19	Taken from last year's return (1903).
1,745,598	13,340	15	10	20	
59,595,886		8		21	
935,419	49,167	20	12	22	
				23	Not under construction.
88,933		8		24	
1,100,008	77,900	9	7	25	
733,045	109,565	30	15	26	
512,062		8		27	
134,228	66,087			28	
7,649,850		8		29	
646,295		15		30	
359,593		8		31	
4,457,761		8		32	
721,330		21		33	
1,984,663				34	
800,000		15		35	Return incomplete.
1,396,389		7		36	
510,502		8		37	
				38	Not in operation.
2,008,180		10		39	
				40	No return received.
478,590		9		41	
543,889				42	
56,675,490				43	
478,868				44	
7,763,562		10		45	
224,424		15		46	
176,067		8		47	
181,689,998	400,161				

No. 5.—Summary Statement of Description of

Number.	Name of Electric Railway.	Mileage.	Flour.		Grain.		Live Stock.	
			Barrels.	Tons.	Bushels.	Tons.	No.	Tons
1	Berlin and Waterloo 3·02 Leased Line.—Berlin and Bridgeport 2·50	5·52						
2	Brantford Street	7·00						
3	British Columbia	48·00						
4	Cape Breton	11·80						
5	Cornwall Street	6·00						
6	Galt, Preston and Hespeler— 9·00 Leased Line —Preston to Berlin 7.00	16·00	22,900	2,301	31,000	903	420	270
7	Grand Valley (Brantford to Paris)	6·00						
8	Guelph Radail	5·50						
9	Halifax Tramway	12·13						
10	Hamilton and Dundas	7·25						
11	Hamilton, Grimsby and Beamsville	27·50			900	27	42	17
12	Hamilton Radial	12·00						
13	Hamilton Street	22·00						
14	Hull	14·50	1,000	100			518	185
15	International Transit Co. (Sault Ste. Marie)	3·30						
16	Kingston, Portsmouth and Cataraqui	7·50						
17	Lévis County	10·25						
18	London Street	31·00						
19	Metropolitan (Toronto)	29·00						
20	Montreal Park and Island	37·99						
21	Montreal Street	123·67						
22	Montreal Terminal	18·34		203				
23	Morrisburg (not under construction)							
24	Nelson Tramway, B.C.	3·00						
25	Niagara Falls Park and River	13·68						
26	Niagara, St. Catharines and Toronto	19·94	24,950	2,495	56,071	985	40	20
27	Niagara Falls, Wesley Park and Clifton (formerly Wesley Park and Clifton)	4·50						
28	Oshawa	8·02	2,670	267	79,381	2,183	284	199
29	Ottawa	22·87						
30	Port Arthur Street	9·00						
31	Port Dalhousie, St. Catharines and Thorold Street	6·82						
32	Quebec Railway, Light and Power Co. (Citadel Division)	17·22						
33	Quebec Railway, Light and Power Co. (Montmorency Division)	25·00						
34	Sandwich, Windsor and Amherstburg	23·15						
35	Sherbrooke Street	7·00						
36	St. John, N.B.	13·00						
37	Sarnia Street	4·50						
38	South-western							
39	Sydney and Glace Bay	18·80						
40	St. Thomas, Ont.							
41	Toronto Suburban	8·50						
42	Toronto and Mimico	5·87						
43	Toronto Street	46·75						
44	Toronto and Scarboro	5·07						
45	Winnipeg Street	28·00						
46	Woodstock, Thames Valley and Ingersoll	11·50						
47	Yarmouth	2·06						
		766·50	51,520	5,366	167,352	4,098	1,304	691

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Freight Carried for the Year ended June 30, 1904.

Lumber of all kinds, Ft. B. M.		Coal and other Fuel.		Manufactured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Feet.	Tons.	Cords.	Tons.	Tons.	Tons.	Tons.		
							1	
							2	
				6,066		6,066	3	
							4	
							5	
430,000	618		6,709	1,655	18,375	30,831	6	
					15	15	7	
	542		3,893	585	2,980	8,000	8	
							9	
					1,310	1,310	10	
12,000	16		20	15	6,549	6,644	11	
					2,600	2,600	12	
							13	
17,988,102	23,560		1,170	2,320	418	27,753	14	
					883	883	15	
							16	
							17	
							18	
							19	
			470	1,041	11,829	13,340	20	
							21	
	2,661		9,329	22,812	14,162	49,167	22	
							23	
							24	
					77,900	77,900	25	*Stone and building material
318,950	8,060		2,125	19,420	76,460	109,565	26	
							27	
3,898,857	6,823		1,494	13,638	41,483	66,087	28	
							29	
							30	
							31	
							32	
							33	
							34	
							35	
							36	
							37	
							38	Not in operation.
							39	
							40	No return received.
							41	
							42	
							43	
							44	
							45	
							46	
							47	
22,647,909	42,280		25,210	67,552	254,964	400,161		

No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Electric Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			$ cts.	$ cts.	$ cts.
1	Berlin and Waterloo ... 3·02				
	Leased line—Berlin and Bridgeport.. 2.50	5·52	21,721 29		631 29
2	Brantford Street	7·00	12,438 13		
3	British Columbia	48·00	434,331 02	18,197 40	480 00
4	Cape Breton	11·80	63,343 10		
5	Cornwall Street	6·00	12,591 18	6,129 91	250 00
6	Galt, Preston and Hespeler ... 9 00				
	Leased line—Preston to Berlin .... 7·00	16·00	28,074 27	10,944 79	1,645 44
7	Grand Valley (Brantford to Paris)	6·00	21,247 99	275 64	
8	Guelph Radial	5·50	17,112 62	800 32	
9	Halifax Tramway	12·13	159,186 64		
10	Hamilton and Dundas	7 25	28,952 03	1,781 77	75 63
11	Hamilton, Grimsby and Beamsville	27·50	47,419 07	11,324 94	6,088 07
12	Hamilton Radial	12·00	63,471 21	3,388 85	431 98
13	Hamilton Street	22·00	217,197 87		
14	Hull	14 50	54,601 25	7,111 31	600 00
15	International Transit Co. (Sault Ste. Marie)	3·30	44,217 35	1,767 10	
16	Kingston, Portsmouth and Cataraqui	7·50	26,524 15	443 00	4,887 91
17	Levis County	10·25	35,044 04		
18	London Street	31·00	157,794 48		
19	Metropolitan (Toronto)	29·00	69,029 53	8,239 10	2,000 00
20	Montreal Park and Island	37·99	158,109 67	1,858 44	
21	Montreal Street	123·67	2,385,846 87		
22	Montreal Terminal	18·34	62,889 10	12,916 25	500 00
23	Morrisburg (not under construction)				
24	Nelson Tramway, B.C.	3·00	4,712 85		
25	Niagara Falls, Park and River	13·68	94,668 67	21,127 00	
26	Niagara, St. Catharines and Toronto	19·94	75,433 68	44,355 33	1,162 20
27	Niagara Falls, Wesley Park and Clifton (formerly Wesley Park and Clifton)	4·50	26,959 69		
28	Oshawa	8·02	7,491 61	28,434 80	2,877 71
29	Ottawa	22·87	358,411 75		4,000 00
30	Port Arthur Street	9 00	36,212 90		
31	Port Dalhousie, St. Catharines and Thorold	6·82	17,706 10		
32	Quebec Railway, Light and Power Co. (Citadel Division)	17 22	189,467 50		750 00
33	Quebec Railway, Light and Power Co. (Montmorency Division)	25·00	85,189 49		898 82
34	Sandwich, Windsor and Amherstburg	23·15	97,273 08		1,303 29
35	Sherbrooke Street	7 00	27,000 00		
36	Saint John, N. B.	13·00	106,880 88		
37	Sarnia	4·50	21,639 25	3,047 52	688 00
38	South-western				
39	Sydney and Glace Bay	18·80	91,359 66		779 36
40	St. Thomas (Ont.)				
41	Toronto Suburban	8·50	20,652 99		
42	Toronto and Mimico	5·87	28,916 96		
43	Toronto Street	46·75	2,298,720 89		
44	Toronto and Scarboro'	5·07	19,619 76		
45	Winnipeg Street	28·00	337,323 82		
46	Woodstock, Thames Valley and Ingersoll	11·50	16,878 46		564 00
47	Yarmouth	2·06	7,900 47		125 00
		766·50	8,082,373 63	182.143 47	30,738 70

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for the Year ending June 30, 1904.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Car Mile.	Number.	Remarks.
$ cts.	$ cts.	$ cts.	p. c.	Cts.		
1,115 18	23,467 76	—1,048 78	96	25	1	
5,720 50	18,158 63	—3,441 96	84	22	2	
1,500 00	454,508 42	159,824 11	154	23	3	
9,668 95	73,012 05	6,034 96	109	25	4	
1,077 05	19,958 14	476 17	102	11	5	
352 64	41,017 14	2,273 89	105	28	6	
3,561 22	25,084 85	5,405 76	127	36	7	
1,976 47	19,889 41	1,800 00	109	09	8	
678 96	150,865 60	39,931 97	136	21	9	
5,912 95	36,722 38	19,202 23	209	49	10	
934 28	65,766 36	31,271 41	190	28	11	
.....	67,292 04	32,969 19	196	33	12	
2,902 48	220,100 35	80,811 22	158	17	13	
22,560 76	84,873 32	14,365 89	120	17	14	
2,455 15	48,439 60	2,630 95	105	29	15	
911 56	32,766 62	7,569 98	130	41	16	
50 00	35,094 04	11,993 04	152	16	17	
7,211 72	165,006 20	46,926 83	139	14	18	
128 00	79,396 63	24,415 35	144	.....	19	
517 91	160,486 02	—9,081 14	94	23	20	
26,916 45	2,412,763 32	939,561 83	163	20	21	
7,390 29	83,686 64	18,968 59	129	15	22	
.....	.....	.....	.....	.....	23	
.....	4,712 85	10,365 86	31	14	24	
8,406 51	124,201 58	70,583 96	231	39	25	
2,482 25	123,433 46	37,335 28	143	28	26	
.....	26,959 60	15,911 12	244	18	27	
1,468 90	40,183 02	3,686 45	110	72	28	
.....	362,411 75	143,415 16	165	15	29	
510 95	36,723 85	9,165 33	133	23	30	
.....	17,706 10	7,284 41	169	17	31	
.....	190,217 50	54,029 45	139	17	32	
410 00	86,498 31	35,716 64	170	51	33	
19,095 63	117,672 00	48,945 81	171	22	34	
.....	27,000 00	11,225 00	171	07	35	Incomplete return
.....	106,880 88	37,831 79	154	20	36	
4,074 90	29,449 67	6,648 65	129	35	37	
.....	.....	.....	.....	.....	38	Not in operation.
34 00	92,173 02	27,073 62	141	28	39	
.....	.....	.....	.....	.....	40	No return received.
428 00	21,080 99	1,172 54	105	13	41	
.....	28,916 96	8,864 87	144	16	42	
11,899 25	2,310,620 14	1,008,393 20	177	19	43	
.....	19,619 76	5,014 38	134	11	44	
1,180 00	338,503 82	162,000 76	192	22	45	
2,205 83	19,648 29	9,659 40	196	21	46	
2,614 64	10,640 11	638 78	106	13	47	
158,353 38	8,453,609 18	3,127,092 23	.....	.....		

No. 7.—Summary Statement of Operating

Number.	Name of Electric Railway.	Mileage	Maintenance of Way Buildings, &c.	Cost of Motive Power.	Maintenance of Cars.
			$ cts.	$ cts.	$ cts.
1	Berlin and Waterloo	3·02	5 52	2,310 81	8,411 68	1,925 00
	Leased line—Berlin and Bridgeport	2·50				
2	Brantford Street	7·00		666 00	7,130 06	
3	British Columbia	48 00		16,921 54		33,093 05
4	Cape Breton	11·80		7,212 99	29,606 25	8,346 15
5	Cornwall Street	6·00		2,560 86	1,678 91	3,543 05
6	Galt, Preston and Hespeler	9·00	16·00	6,231 77	18.355 47	900 00
	Leased line—Preston and Berlin	7·00				
7	Grand Valley (Brantford to Paris)	6·00			5,820 58	
8	Guelph Radial	5·50		4,770 59	3,715 09	8,640 84
9	Halifax Tramway	12·13		9,480 93	27,849 39	15,349 48
10	Hamilton and Dundas	7·25		4,529 39	2,231 49	684 85
11	Hamilton, Grimsby and Beamsville	27·50		6,811 73	7,613 40	3,244 25
12	Hamilton Radial	12·00		3,408 18	8,026 69	4,398 89
13	Hamilton Street	22·00		17,842 47	32,973 86	8,124 33
14	Hull	14·50		10,354 57	4,634 84	7,833 34
15	International Transit Co. (Sault Ste. Marie)	3·30		1,384 75	6,000 00	2,576 94
16	Kingston, Portsmouth and Cataraqui	7·50		104 76	12,849 83	2,426 54
17	Levis County	10·25		4,121 32	8,178 59	841 27
18	London Street	31·00		1,806 48	26,386 00	6,449 32
19	Metropolitan (Toronto)	29·00		11,545 10	11,802 14	7,434 36
20	Montreal Park and Island	37·99		44,529 53	47,565 61	18,388 76
21	Montreal Street	123 67		193,684 02	215,701 27	207,287 52
22	Montreal Terminal	18·34		11,036 87	19.677 29	2,711 44
23	Morrisburg (not under construction)					
24	Nelson Tramway, B.C	3·00		218 40	4,006 24	2,478 00
25	Niagara Falls Park and River	13·68		8,643 87	14,589 58	3,806 07
26	Niagara, St. Catharines and Toronto	19·94		17,355 86	13,537 41	7,494 90
27	Niagara Falls, Wesley Park and Clifton (formerly Wesley Park and Clifton)	4·50		1,427 18	5,697 44	1,606 44
28	Oshawa	8·02		7,351 76	10,101 09	1,560 02
29	Ottawa	22·87		35,884 04	19,019 15	30,114 08
30	Port Arthur Street	9·00		7,450 45	3,061 42	5,860 89
31	Port Dalhousie, St. Catharines and Thorold	6·82		1,714 40	4,707 23	1,433 36
32	Quebec Railway, Light and Power Co. (Citadel Division)	17·22		22,827 98	77,816 76	7,476 64
33	Quebec Railway, Light and Power Co. (Montmorency Division)	25·00		11,267 05	9,714 10	4,513 55
34	Sandwich, Windsor and Amherstburg	23·15		10,195 74	24,268 22	2,476 10
35	Sherbrooke Street	7·00		12,275 00		1,000 00
36	St. John, N.B	13·00		14,814 50	19,133 29	11,190 29
37	Sarnia	4·50		1,000 90		2,545 99
38	South-western					
39	Sydney and Glace Bay	18·80		7,843 60	17,278 38	12,240 46
40	St. Thomas (Ontario)					
41	Toronto Suburban	8·50		2,004 19	13,615 09	948 52
42	Toronto and Mimico	5 87		7,464 77	2,194 65	1,199 67
43	Toronto Street	46·75		59,776 39	562,473 90	196,823 88
44	Toronto and Scarboro	5·07		1,957 13	2,245 20	518 21
45	Winnipeg Street	28·00		12,206 97	53,694 86	19,341 35
46	Woodstock, Thames Valley and Ingersoll	11·50		901 63	4,789 36	328 96
47	Yarmouth	2·06		250 00	9,047 55	57 00
		766·50		606,146 47	1,377,199 36	659,213 76

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Expenses for the Year ended June 30, 1904.

General and Operating Charges.	Total.	Cost of Operating per Car Mile.	Number.	Remarks.
$ cts.	$ cts.	Cts.		
11,869 05	24,516 54	26	1	
13,804 53	21,600 59	26	2	
*244,669 72	294,684 31	15	3	* Includes motive power cost.
21,811 70	66,977 09	22	4	
11,699 15	19,481 97	10	5	
13,256 01	38,743 25	26	6	
13,858 51	19,679 09	28	7	
962 89	18,089 41	08	8	
58,253 83	110,933 63	15	9	
10,074 42	17,520 15	23	10	
16,825 57	34,494 95	15	11	
18,489 09	34,322 85	17	12	
80,348 47	139,289 13	11	13	
47,684 68	70,507 43	14	14	
35,846 96	45,808 65	28	15	
9,815 51	25,196 64	31	16	
9,959 82	23,101 00	10	17	
83,437 57	118,079 37	10	18	
24,199 68	54,981 28		19	
59,083 26	169,567 16	25	20	
856,528 68	1,473,201 49	12	21	
31,292 45	64,718 05	11	22	
.....	.....	.....	23	
8,376 07	15,078 71	43	24	
26,578 10	53,617 62	17	25	
47,710 01	86,098 18	16	26	
2,317 42	11,048 48	08	27	
17,483 70	36,496 57	65	28	
133,979 32	218,996 59	09	29	
11,185 76	27,558 52	17	30	
2,566 70	10,421 69	09	31	
28,066 67	136,188 05	12	32	
25,286 97	50,781 67	30	33	
31,786 13	68,726 19	13	34	
2,500 00	15,775 00	04	35	
23,911 01	69,049 09	13	36	
19,254 13	22,801 02	27	37	
.....	.....	.....	38	Not in operation.
27,736 96	65,099 40	20	39	
.....	.....	.....	40	No return received.
3,340 65	19,908 45	12	41	
9,193 00	20,052 09	11	42	
483,152 77	1,302,226 94	11	43	
9,884 84	14,605 38	08	44	
91,259 88	176,503 06	12	45	
3,968 94	9,988 89	11	46	
646 78	10,001 33	12	47	
2,683,957 36	5,326,516 95			

No. 8—Summary of Accidents for

Number.	Name of Electric Railway.	Mileage	Passengers, Employés or Others.	Fell from Cars.		Jumping on or off Cars.		At work at or near Track making up Trains.	
				Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1	British Columbia	48·00	Passengers	1	13		15		
			Employees		4		1		2
			Others						
2	Cape Breton	11·80	Passengers				2		
3	Galt, Preston and Hespeler 9 / Leased line—Preston to Berlin. 7	16·00	Employees		1				
			Others						
4	Halifax Tramway	12·13	Passengers		2				
5	Hamilton and Dundas	7·25	Passengers		2		2		
6	Hamilton, Grimsby and Beamsville	27·50	Passengers						
7	Hamilton Radial	12·00	Passengers		2		1		
8	Hamilton Street	22·00	Passengers		21		16		
9	Hull Street	14·50	Passengers				2		
10	Kingston, Portsmouth and Cataraqui	7·50	Others						
11	Lévis Street	10·25	Passengers				2		
			Employees				1		
			Others						
12	London Street	31·00	Passengers				3		
			Others						
13	*Metropolitan (Toronto)	29·00							
14	Montreal Park and Island	37·99	Passengers		1		3		
			Others						
15	Montreal Street	123·67	Passengers		4		180		
			Employees				4		
			Others						
16	Montreal Terminal	18·34	Passengers		1				
			Others						
17	Niagara Falls Park and River	13·68	Passengers						
			Employees						
			Others						
18	Niagara, St. Catharines and Toronto	19·94	Passengers		1				
			Employees		1				
19	Oshawa	8·02	Employees						1
			Others						
20	Ottawa	22·87	Passengers				13		
			Employees				2		
			Others				2		
21	Port Arthur Street	9·00	Passengers				1		
			Employees						
			Others						
22	Port Dalhousie, St. Catharines and Thorold	6·82	Passengers						
			Others	1					
23	Quebec Railway, Light and Power Co. (Citadel Division)	17·22	Passengers			1			
24	Quebec Railway, Light and Power Co. (Montmorency Division)	25·00	Others						
25	Saint John, N.B	13·00	Passengers				11		
			Others						
26	Sarnia	4·50	Others						
27	Sydney and Glace Bay	18·80	Passengers		2		1		
			Others						
28	Toronto and Mimico	5·87	Passengers		4		2		
			Employees		1				
			Others						
29	Toronto Street	46·75	Passengers	3	64	1	53		
			Employees		13				
			Others						
30	Toronto and Scarboro	5·06	Passengers		1				
			Employees		1				
				5	139	2	317		3

* Return incomplete—No accidents shown.

the Year ended June 30, 1904.

Putting arms or heads out of Windows.		Coupling Cars.		Collisions or by Cars thrown from Track.		Struck by Engine or Cars on Highway Crossings.		Walking, standing, lying or being on Track.		Other Causes		Totals.		Number
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
					1				1		3	1	33	
			1		5						4		17	1
				2	3			1	5		3	3	11	
									6				8	2
													1	
									1				1	3
													2	4
							1						5	5
					2						1		3	6
							1						4	7
						3	18					3	55	8
													2	9
									1				1	10
													2	
													1	11
								1	2		1		2	
					2						1		6	
							1		5		1		7	12
														13
													4	
						3	3					3	3	14
													184	
						1	2					1	6	15
						11	134	1				12	134	
					3								4	
						1	2				1	1	3	16
	2				1						1		4	
			2								1		3	17
							2				1		3	
													1	
						1						1	1	18
			1										2	
									1				1	19
					5						6		24	
					1						3		6	20
					10			3	12		2	3	16	
				1	1							1	11	
										1		1	1	21
								1				1	2	
												1	1	22
												1		23
									1				1	24
													11	
									5		5		10	25
								1				1		26
							3	3	2			3	3	
													5	27
													6	
													1	28
									1				1	
					11						7	1	135	
	1		4		3				1		2		24	29
					5			11	67		1	11	73	
													1	30
													1	
	3		8	3	53	20	167	22	111	1	43	53	844	

TOTAL Fatal Accidents for Year ended June 30, 1904.

	Passengers Killed.	Employees Killed.	Others Killed.	Total Killed.
Falling from cars or engines	4		1	5
Jumping on or off trains in motion	2			2
At work making up trains				
Putting heads or arms out of windows				
Coupling cars				
Collisions and derailment		1	2	3
Struck by engings or cars on highway crossings	3	2	15	20
Walking or being on track	1		21	22
Explosions				
Striking bridges				
Other causes			1	1
Total killed	10	3	40	53

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Chambly Canal	II	21
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Lachine Canal	II	7
Lake St. Francis	II	11
Lake St. Louis	II	10
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